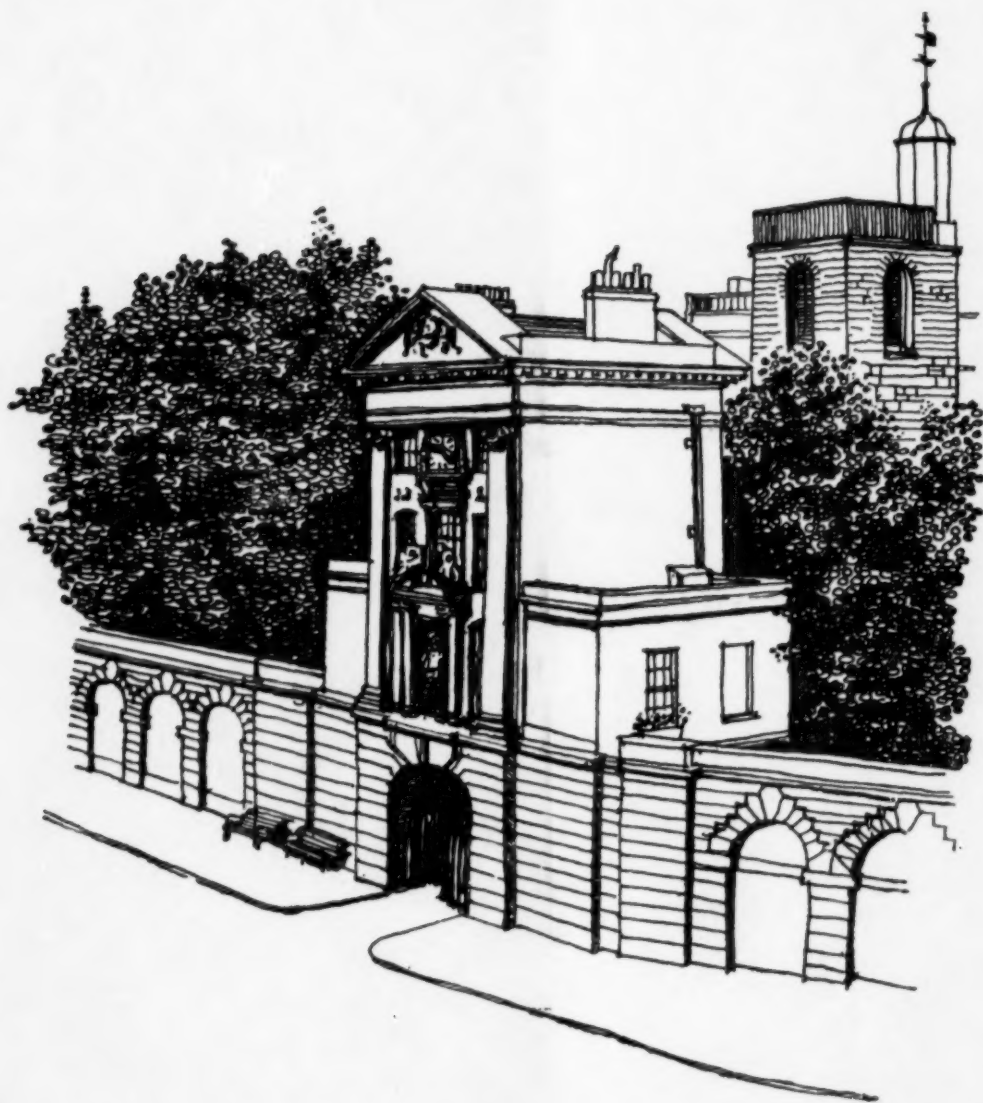


ST. BARTHOLOMEW'S
HOSPITAL JOURNAL



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ST. BARTHOLOMEW'S HOSPITAL JOURNAL

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February, 1954

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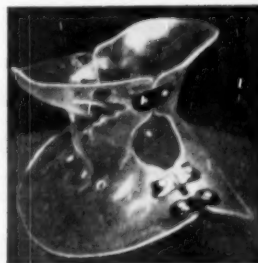
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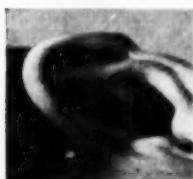
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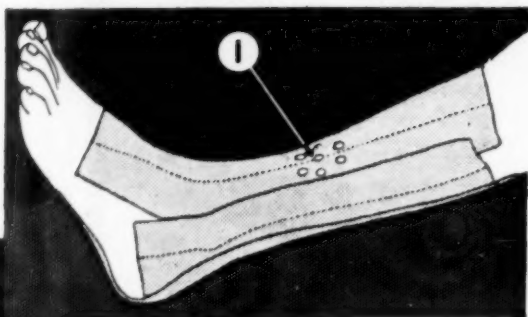
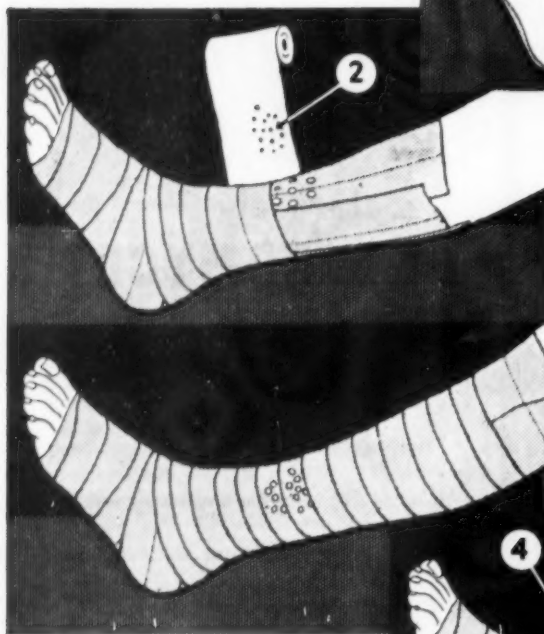
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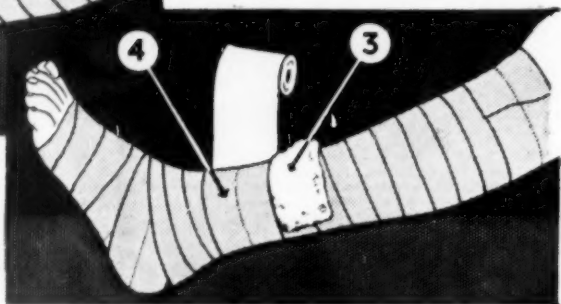


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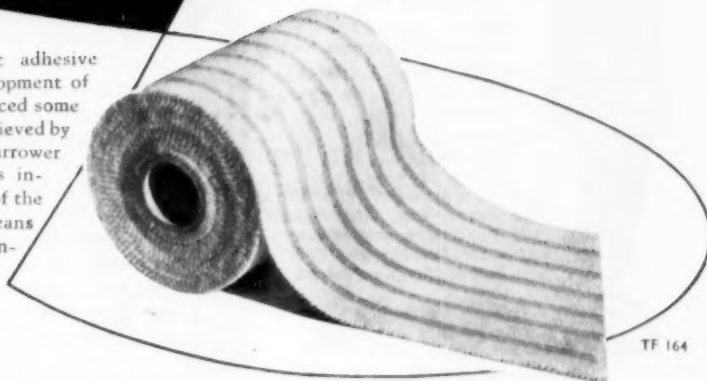


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ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LVIII.

FEBRUARY 1954

No. 2

ON BEING HIGH POWERED

THERE are those who have a love of small print, and the smaller the print the better. These are the men who collect obscurities, who treasure quaint eponyms. It is, like collecting matchbox tops, a harmless hobby. No one is any the worse for knowing forty-nine causes of haemoptysis, provided he remembers that tuberculosis is one of the more usual reasons for spitting up blood. The damage to a man's education comes when he is so obsessed with the footnotes that he remembers nothing else. It is of this peril that we have been warned in a hundred cautionary tales.

There is the story of the student who gave the blood supply of the sciatic nerve in the upper arm. The Philistine examiner failed him.

Yet most people are well aware that it is essential to learn the essentials, that what is needed in clinical training is a good ground-work, that one must learn to walk before one can run. We are not lacking in good sound solid advice, and that advice is seldom unheeded. The danger is all the other way.

For if there is one quick way to damn a thing, in the eyes of medical students, it is to call it "high-powered." It is high-powered to quote any of the journals in the Library, or to know of anything that has not yet been published in the standard text books. The lecturer suddenly checks his enthusiasm and says, "But I will not bother you with this: all you need to know for the examination is. . . ." Even in those things that have nothing to do with medicine, we must not be high-powered. It is high-powered to say anything about modern art, except that we do not know which way up the picture goes. The Unknown Political Prisoner exhibition was the work of high-powered lunatics.

Rightly, anything new must show that it is worth while before it is accepted, and we are suspicious of cranks and freaks. But it is the exaggeration of this feeling which is harmful. For what is high-powered in our student days may be the common practice of to-morrow. There are still some doctors who regard penicillin as high-powered, and send their patients to the nearest hospital to get injections. If we do not learn to use judgment and discretion when we are students, it will be more difficult to find our way about medicine when we have no medical school to guide us. It is the timidity with which we approach the high-powered that has encouraged over-specialisation, for we need not suppose that the small print is intelligible only to the specialist.

There is, however, no glory in failing one's examinations, in neglecting the syllabus. Yet is the student's time so crowded out working for these difficult examinations that he has no time for anything that asks for more of his thought? No one can give a universal answer to this question; it depends on the individual student, and on the encouragement that the student receives from his teacher. There were many specific suggestions in the Abernethian Society discussion on medical education. It would be useful if a lecturer would occasionally give references to papers and books on his subject. Perhaps, too, the subject of a ward round could sometimes be announced beforehand, and reading suggested in preparation for it. It would soon be possible to tell how many students were able to find time for this reading.

Yet however many specific suggestions are made, the idea that must light it all is that knowledge should not be cut into two parts, divided artificially into the high powered and the stuff we learn,

Tennis Court

The new hard tennis courts behind the hostel are now in full use. It is a great luxury to have tennis courts built in the centre of London on such expensive ground, and the authorities responsible should be thanked for providing such an excellent opportunity for sport and exercise so close to the hospital. The journey to Chislehurst may have deterred some people who wanted exercise from getting any, but these tennis courts are in reach of anyone who can still stagger five yards.

There are only two disadvantages to these courts. One is the dust on them, which is inevitable in this smoke-polluted city. Any one who plays in whites soon finds himself playing in grey. The other disadvantage is the audience. People passing on the pavement, who would otherwise be watching holes being dug in some neighbouring road, come and watch the game. The line of grimly silent spectators peering through the fencing, waiting glumly for one's mistakes, produces panic in the more sensitive players.

Perhaps it will be possible later on to alter the present rather cumbersome booking arrangements.

Three Hospitals Orchestra

A concert was given by the Three Hospitals Orchestra in the Great Hall, St. Bartholomew's Hospital, on Saturday, 19th December, 1953. The request to write this account of the concert reached the writer some weeks after the performance, so that details were less clearly remembered.

The Hall was extremely well filled by an appreciative and an enthusiastic audience. The acoustics which are for a speaker difficult and even disheartening, were greatly improved for the music by skilful drapings and other arrangements, the result being that the efforts of the orchestra and of the soloist could be well appreciated all over the Hall.

The concert began with a performance of Mozart's Overture to the Magic Flute, which was played at a tempo which enabled the orchestra to give due emphasis to the details of the music without the handicap of undue speed. This was followed by Elgar's concerto in E minor, op. 85, for violin, cello, and strings, in which the soloist was Miss Amaryllis Fleming. Her performance in this work was sure and competent, and sympathetic not only to the music itself but to the associated efforts of the orchestra.

She is to be congratulated on a very fine performance. After the interval, during which some light refreshment was available, the orchestra played Rachmaninov's Symphony No. 2 in E minor, op. 27.

It was rather disappointing to recognise so few Bart's faces among the performers and it is to be hoped that this interesting and delightful concert may stimulate recruits from our Hospital. Thanks are finally due to Mr. Norman Delmar who conducted with sensibility, vigour and success. The availability of a first-class conductor should be a further stimulus to recruitment to the orchestra by its third—and at the moment junior—member. It was a pleasure to welcome members of the medical and nursing staffs of St. Mary's and St. Thomas's Hospitals.

Fencing

We have received this month a report from the Fencing Club. So much has been said in recent years about the lack of sporting success at Bart's that it is a pleasure to hear of the very creditable performance of the Fencing Club following fast on the victories of the Boat Club.

Airs on a Suture

The show that was put on at the Cripple-gate Theatre this Christmas was a dashing success. On each of the three nights there was the air of a tremendously successful First Night. It was a first-class show.

It is not easy for the producers to take a number of short ward shows, and weld them into a coherent evening's entertainment. Things that go well in the wards do not always go well on the stage, for the audience is different, and the spirit of the occasion is different. The aim at the Cripple-gate is quite clearly to entertain a medical audience that wants to hear topical Bart's jokes, while the most important aim in the hospital should not be to entertain the doctors or the nurses but to put on a show for the patients. And the Pot-Pourri had its topical songs and its topical jokes. Not only was the material good, but it was put over with admiral slickness and glitter.

The humour did not, for the most part, rely on bawdiness. Although the songs were often very funny, there was not much use made of the fact that there was a stage to play with. It was more radio humour than



THE SQUARE, DECEMBER

stage humour. There was little ingenuity in situation. With one or two exceptions all the turns were song and dance. But such was the excellence of the songs and dances that there was no sense of monotony.

One of the problems that the producers have to solve is the difficulty of what to do between acts. For some poor man to have to tell half a dozen funny stories is not the only solution. The people who told the stories told them well, and the stories they told were really funny, but jokes do not make good interval music for jokes.

The Pot-Pourri has to be made out of the ward shows in a very short space of time. The people who do this job deserve praise for having done it well. There is a great deal of organisation to be done, the printing of tickets, the rapid printing of programmes, the transport of props. Bert, who again did the make-up as expertly as he has done for the hospital for the last 30 years, deserves our thanks.

Everyone who saw the Pot-Pourri will agree that Bart's put on, for three nights, the best revue in town.

Christmas Dinners

By now Christmas is a month-old memory, but good food is not easily forgotten. Both in the hostel and in the hospital the kitchen staff produced an excellent Christmas dinner. The meal in the hospital was a particularly colourful affair, as there were present a number of disreputable pirates and assorted cut-throats, all painted ready for the ward shows.

The Christmas dinner in the hostel produced everything except a speech from Dr. Scowen. There were crackers, paper hats, roast turkey, plum pudding, but no speech from Dr. Scowen. At this dinner there arose again one of those unsolved problems of the modern age, what should one do when Dress is optional? Dress should never be

optional. The result is a ragged-looking mixture of Dress and Undress, and everyone's embarrassment. If there is doubt as to whether everyone can produce evening dress, then there should be no question of Dress.

Show Cases

There has recently been a display in the Library of the records and treasures of the Abernethian Society. During its long history the society has accumulated many interesting documents. They were able to display letters bearing the signatures of Osler, of Paget, and of Abernethy himself.

The minute books contain an enormous number of pages, accounts of all lectures given to the society since its foundation. There is much of historical interest in these books and much which now seems quaint prejudice.

Uplift and Downlift

This hospital is remarkable for the number of its lifts. They vary in character from the decrepit to the unserviceable. When people talk of the stress and strain of modern life, it is to these lifts that they are furtively referring. Legs aching, the sad cry "Stop at the fourth floor, please," and the empty lift whistles past, intent on causing the maximum inconvenience to the maximum number of people. That particular lift is a clear case of diabolical possession. It is licenced to carry five passengers, but it creaks and groans in mockery if its load be no more than two nurses, one student, and a Chief, implying to everyone's embarrassment that someone is grossly overweight. Thus must Jonah have glanced at his feet, coughing nervously.

The George V block also has a number of lifts less infamous than that reserved for medical and nursing staff. There is the one reserved for dustbins, and there is the respectable old lift whose heavy dungeon-like doors need a strong man's weight to move them. There is a lift that no longer lifts, but let's let sleeping dogs lie.

The pathology block possesses a machine that was, in 1911, permitted By Order to carry eight people, but which now is only allowed to carry four. This is the famous cage through whose bars Sir Holburt Waring was offered a banana.

Five minutes away, separated by 40 years, is the College Hall. Swift silent lifts with infallible memories, bright lights and gay colours, automatic doors that know to open again if they accidentally crush you, this is Progress.

Abernethian Society

On Tuesday, February 2, students will present a small number of interesting cases and a discussion will follow. This will be held at 5.45 p.m. in M.O.P.s, and a senior registrar will be in the Chair.

On Wednesday, February 10, there will be an afternoon visit to the Spinal Injuries Centre at Stoke Mandeville.

On Thursday, February 18, Dr. James Andrew will talk on his experiences as an M.O. in the Antarctic, and will show a short colour film. This will be in the Recreation Room, College Hall, at 8 p.m.

On Thursday, February 25, Dr. Keith Simpson will speak on "Crime and the Doctor" at 5.30 p.m. in the Clinical Lecture Theatre.

On Thursday, March 11, Dr. Melville Arnott, Professor of Medicine at the University of Birmingham, is making a special visit to London to lecture to the Society. His subject will be "The Aetiology of Cardio-Vascular Disease."

Crime

Anyone who leaves his soap or his toothpaste unguarded in the College Hall will find on his return that he is the owner of significantly less soap and significantly less toothpaste. He will be face to face with the crime wave. It is a major social problem when one has to keep one's toothpaste under lock and key. Are we to booby-trap the bathroom? Why should men, otherwise honest, bath with other men's soap, leaving the door open through sheer bravado? Someone recently went so far as to purloin a razor blade. Good mornings do not begin with a bladeless razor. How much longer will the taps be safe? Oh, you'll take the cold tap and I'll take the hot tap.

Change of Address

The following Bart.'s men have sent us new addresses:

A. Barnsley, Hurstcote, Shere, Guildford, Surrey. Telephone: Shere 238.

W. H. Rowe Jeremy, 6 Elm Grove Road, Exeter. Telephone: Exeter 56108.

Philip Gosse, 15 Grantchester Street, Cambridge.

Sqd./Ldr. J. H. Reading, 19 O.M.Q., R.A.F., Honington, Bury St. Edmunds, Suffolk.

Congratulations

To Ena, wife of Sqd./Ldr. James H. Reading, at the Radcliffe Infirmary, Oxford, a son Anthony Michael.

THE NOTEBOOK OF EDWARD JOHN SPRY

Extracts from the Notebook of Edward John Spry, M.D. Sometime Student of St. Bartholomew's Hospital, Surgeon to the Truro Royal Infirmary and thrice Mayor of Truro, in the County of Cornwall.

(Published by the kindness of Dr. J. C. SPRY, LEVERTON)

Eliz. Williams aet. 41—*Gwennap—Scirrhus Mammæ.* Admitted May 27th, 1847. Operated on June 1st. Present Mr. Bruce, Mr. Bassett, Gorrings, Pomeroy, Andrew, R.N., Mr. Martyn of St. Columb, Leverton. Inhaled three drs. æther*—insensible in two minutes—operation performed without any consciousness of pain—shortly able to walk downstairs—passed a good night—the only circumstance which delayed the progress of the case was a marginal slough of the incision—A large scirrhus tumour was removed—no artery required tying—two sutures brought the integuments into apposition—cold water dressing—then isinglass plaister—then simple dressing and adhesive plaister.

July 1st. Almost healed—in excellent health—

Mary Ann Kinsman—Polypus Uteri— Aet. 43. Admitted Jan. 28th, 1847, under the care of Dr. Carlyon. The wife of a mason residing at Redruth—has had nine children—is of middle stature, dark hair, sallow complexion, grey eyes—Her father died of Phthisis her mother died at 82. She states that until two years since she enjoyed good health when she first noticed unusual discharges of blood ex vagina, without pain, but some uneasiness in the back—about nine months since had a violent pain in the abdomen which obliged her to keep to her bed for a long time. Her Surgeon (Mr. Boon) called it "a gathering in the womo"—yellow looking matter was freely discharged per vaginam—every few days since that time she has had a purulent sanguineous discharge—obtained no relief from medicine—discharge latterly has been more bloody occasioning frequent fainting. Tried the following T. Ferri serquichloridi dr. 1. T. Hyos. dr. 2. Mist. Camph. .Op. and Mist. Cap Coch. 2 ter die—

Feb. 2nd. Again profuse discharge—pulse 100—very weak. Countenance very pallid—I examined her this morning with Dr. P. Smith's speculum vaginae—A large polypus was found occupying almost the whole of the vagina—attached to the uterus within the cervix—on the left side, about

midway between cervix and fundus—ascertained this and that there was no inversion by passing a small rectum bougie into the uterus which passed to the fundus without any interruption on the right side, and measured the length required to reach it—tried the same on the left side of the uterus, but could not reach the same point with the extremity of the bougie by one and a half inch—

Feb. 12th. At the request of Dr. Buckman applied the ligature to the neck of the tumour with the aid of the double canula—the application gave very little or almost no pain—The hæmorrhage, which from the patient's statement was sometimes sufficient to fill an ordinary chamber vessel in 24 hours, ceased from the time of applying the ligature—which I tightened daily and this morning (19th) I found the tumour quite loose in the vagina. It was about the size of a small pear—the lower surface had ulcerated and was hollowed—when suspended in water the edges were flocculent—the tumor was of a firm consistence, but very vascular appearing almost as pervious as a sponge—from which the hæmorrhage was at times terrific—the preparation is in my possession marked No. 10. It is a little darker than when it was removed having been left too long before it was put into spirit—

She had some hæmorrhagic reaction and suffered from an attack of bronchitis which yielded to the ordinary remedies and she left the infirmary March 12th cured.

Couch, of Ladock, aged 16, discharged per rectum on Friday, March 12th, 1847, two masses of foreign matter the first the size of an egg, the second much larger and longer, much compressed and hardened covered with a thin film or coating of albuminous matter having almost a shining appearance—They were voided with much difficulty and with excessive pain in the presence of her mother who placed them afterwards under the pump and unraveled them with a stick—The mother forwarded the masses thus unfolded to me consisting of hair, dyed wool thread, rags all fitted

* Ether as a surgical anaesthetic was first used in England in Dec. 1846.

together and unchanged in appearance as to colour and tenacity. *March 14th.* Visited her this day. She declared to me in the presence of her father and mother that she had not the slightest recollection of having ever swallowed or attempted to swallow any of the matters ejected—There was a general soreness of the abdomen but she bore the pressure of the hand pretty firmly. Her mother stated that when quite a child and just after she was able to walk she allowed her to amuse herself at the settle, the seat of which turned up in which the rags were deposited until the rag man came round to purchase them—that her children had in succession assisted themselves in walking by holding by the edge of this chest when the cover of it was raised and that she supposes the girl must have swallowed all these matters about that period—

Catamenia appeared slightly two years ago—then ceased—was in a state of chlorosis and anaemia when she first applied to me—has been regular now for the last three periods—

July 3rd. Visited me at Truro—rode in a cart—looks healthy and fresh coloured—has grown considerably. Bowels occasionally painful and digestion languid. Gave her some antacid powders and advised daily exercise on a donkey—

Case of early appearance of the Catamenia—M.A.I. aged not quite nine—Catamenia appeared in Dec., 1846, and continued three days—She complained of a little smarting in making water a few days before the event and was alarmed when she discovered what had taken place—She has continued to do so regularly to this time March, 1847—Her mother commenced at 13. The cousin of this little girl was only a little over nine when it happened and has continued regular ever since—now 17—M.A.I. is rather short for her age, but of a set figure and rather stout.

Case of simple fracture of the astragalus through its neck with portion fractured forwards and outwards. Recovery, with considerable motion of the foot.

Thomas Rogers, a very healthy muscular and robust miner aged 42, was brought to the Infirmary on the 24th of September, 1846, and admitted under the care of Mr. Bull. It appeared from the statement made by the patient that whilst at work in the morning of the preceding day at Poldice Mine in Gwennap he had slipped from the end

of a scaffold about five feet high, and had fallen perpendicularly to the ground, the hollow of his right foot coming in contact with a large projecting stone. On attempting to stand he found that he could place no weight on the limb, that it was very much distorted and that it occasioned excessive pain—The Surgeon of the Mine promptly attending, when an attempt was made to restore the displaced parts, and similar efforts having been made the next morning without success he was sent to the Infirmary in a cart and arrived there about nine in the evening—The limb was then examined by Mr. Bassett and Mr. Gorringe (the Assistant Surgeon) who were induced to try the effect of the pulleys which they did very assiduously, but with no better results than attended the former efforts. The condition of the limb as described to me by Mr. Gorringe on his arrival at the Infirmary was this—The foot was very much swollen, extended, the toes turned inwards, and the outer edge of the foot downwards—and if allowed to reach the ground would have rested on its external plantar margin and metatarsal joint of the little toe. There was considerable swelling of the parts and the inner malleolus was deeply buried in the angle of Adduction, whilst the outer malleolus was remarkably prominent, and just below it and a little in front, was a large immoveable projection of bone, covered only by the skin, very tensely stretched. The foot could be brought into a straight line with the tibia and fibula and could be flexed to an angle of 45 degrees with the ankle joint without much effort, but immediately that the hand was removed the parts resumed the same relative positions as before. On carefully rotating the foot when brought into the position described a slight crepitus could be felt—but the patient had no control over the foot and all motion of it occasioned pain—The man passed a tolerable night having slept at intervals—in the morning the limb was not much larger than on the previous evening. On the following morning I was invited to examine the limb in consultation with my colleagues and ascertained the state of the limb to be such as had been already accurately described. I satisfied myself that there existed no fracture of either malleolus, that the displacement was only of some portion of the plantar arch, and not of the entire foot, and that the displaced bone was the astragalus. As the patient was a very

muscular man of florrid complexion and still had a strong pulse it was agreed that he should be bled ad deliquium, be placed fully under the action of the Tartarized Antimony for two or three hours, and that the extension should be once more cautiously tried with the pulleys. This was done very perseveringly, and at the same time direct pressure was made on the projecting bone, but it was found to be impossible to move it. The man was extremely faint and in the most favorable state for overcoming mere muscular resistance, but it was not thought expedient to carry the attempts any further—indeed the pressure on the displaced bone had caused the effused fluid about it to disappear so that there remained only the skin covering it and the slightest incision would have sufficed to expose it. It was deemed however more advisable to leave the process to nature's efforts and to watch the result—Warm fomentations were applied to the limb and he had an anodyne.

Sept. 26th. He passed a tolerable night and suffered less than might have been expected—Bowels had been freely acted upon—Pulse 93 and firm—Considerable ecchymosis about the outer ankle—Fomentations continued—The leg placed in a fracture apparatus and raised—the thigh resting on an inclined plane—

Sept. 29th. No greater constitutional disturbance has been excited—Pulse 93—feels easy—swelling gradually subsiding—Vesications found over the displaced bone. From this time (*Oct. 2nd*) the process of sloughing proceeded which extended over the outer malleolus—Pulse 76—The patient's strength was duly supported, and emollient poultices applied to the part. On the 6th the bone was partially uncovered and on the 20th was found so loose, Mr. G. easily removed it by detaching only a little ligamentous tissue—a large cavity was thus exposed in which could be seen the concave articulating surfaces of the tibia—Some haemorrhage followed its removal which was suppressed by applying a pledget of lint and a roller—The portion of bone removed proved to be the large convex articulating surface of the astragalus, that bone having been broken through its neck, just in a line with the margin of its posterior concave surface, carrying with it the internal angle of its tibial articulation.

Oct. 22nd. The finger introduced into the cavity detected the rough surface of the

remainder of the astragalus in situ, which although a little loosened was too firmly attached to be removed—it was also ascertained by the same mode of investigation that the inner malleolus was uninjured—He was allowed O.1. Porter daily and two ozs. Wine.

Oct. 24th. Considerable discharge of pus from the wound—an abscess which had formed over the inner angle was opened which gave great relief—Strength much reduced—Porter increased to O.2 and wine to 4 ozs. daily, with 6 ozs. brandy.

Oct. 27th. The great discharges have very much reduced his strength and fears were entertained that he might not maintain the struggle, but this morning the circumstances of the case had somewhat improved—very much—there was less discharge and the granulations especially over the outer angle and lower part of the fibular which had also become exposed were more healthy—There were two openings over the inner angle from which large quantities of pus are discharged—Sinuses, an inch deep, run in the direction of the joint.

Nov. 5th. At another consultation held this morning it was determined to make a further effort to save the limb.

Nov. 12th. Improvement continues—sinuses filling up—two superficial sinuses were dilated and the cut surfaces granulated favorably—

Nov. 18th. Limb now rests on cushions—in the extended position supported by a splint on the inside—wounds all healing and has recovered so much strength that he can raise his leg a little from the bed.

Dec. 16th. To this date his amendment was gradual. He is now able to get up daily—wounds heal slowly—Heel raised and leg straight—

1847. *Jan. 1st.* Is now so far restored as to be able to walk tolerably well with the aid of crutches—wounds all healed—the limb is about an inch shorter than the other and still turned pretty much inwards—considerable prominence remaining on the external surface of the foot. Passive motion can be affected to some extent without occasioning pain. Discharged Jan. 2nd, 1847. I saw this man in June, when he was able to walk firmly on the right foot with the help of a stick—He has been at work on the mine about a month—as might be expected the foot is of a very awkward figure, but there is very useful motion in the

anle joint which he thinks is gradually improving. As a proof of the rarity of this accident in Cornwall it may be stated that I had never before met with it and Mr. Bull who has been resident House Surgeon of the Infirmary from its opening in 1798 never recollects the admission of any similar accident. The Surgeons of Gwennap who watch over the casualties to which many thousands of our miners are exposed do not remember to have seen it—and I have obtained similar testimony from other professional friends—I am indebted to the art. in Mr. Bransby Cooper's edition of Sir Astley's valuable work on Dislocations and Fractures of the joints for a very satisfactory account of this

particular variety of dislocation of the Astragalus* and to the publications** of my townsman Mr. Turner of Manchester for much useful practical information on the subject, who appears indeed to have omitted nothing that might serve to make his descriptions of the varied dislocations of the A. minutely complete. Yet the case now described presents some peculiar characteristics although in the main it serves to confirm Mr. Turner's opinion that a dislocation of this bone can never occur without fracture.

* 5th Edition p. 322.

** Transactions of the Prov. Med. and Surgical Association for 1845 Vol. XI—and subseq. in a separate volume.

MÖNCKENBERG

by R. B. P.

Now Mönckeberg's Arteriosclerosis
May sound a most alarming diagnosis,
But through a recent rhyming competition
I have been made aware of this condition,
And in myself have found with consternation
Advanced arterial degeneration.
My arteries, including the aorta,
Have grown a damn sight harder than they oughter—
From overhearing my physicians talk
I'd say they're harder by a good long chalk—
Their middle coats are patched beyond repair,
Their "intima" not really fit to wear,
In short my doctor thinks they're now such wrecks he
Anticipates an early apoplexy!
I'm in distinguished company, it's true,
For many famous men have had it too.
Herr Mönckeberg's confounded monkey tricks
Have played the very deuce with politics!
In England it is generally reckoned
They gave the coup de grace to Charles the Second;
In later years Herr Mönckeberg again
Saw Joseph stricken in his Chamber lain;
Poor Woodrow Wilson in the U.S.A.
Was yet another victim, so they say;
In Russia (which discovered all things first)
Lenin and Stalin both had vessels burst;
In France what finished President Doumerque?
Both rhyme and reason answer—Mönckeberg!

A LITTLE JUDICIOUS LEVITY

by W. R. BETT

Being an address given at the annual dinner of the American Medical Writers Association, at Springfield, Illinois, in September, 1953.

VAGUELY aware of the friendship that once flowered between literature and medicine, physicians continue to describe themselves with, perhaps, undue straining of the phrase as the children of Apollo, who was god of beauty, culture, rhetoric and poetry; leader of the celestial choir on Parnassus; and father of Asclepius, upon whom he bestowed the divine gift of healing. This antonomasia was justified in the days when Sir Thomas Browne, physician of Norwich, could pen such majestic lines as:

'But the iniquity of oblivion blindly scattereth her poppy, and deals with the memory of men without distinction to merit of perpetuity. Who can but pity the founder of the Pyramids? . . . Who knows whether the best of men be known? or whether there be not more remarkable persons forgot, than any that stand remembered in the known account of time? . . . Oblivion is not to be hired: The greater part must be content to be as though they had not been, to be found in the Register of God, not in the record of man.'

What of the present? We belong to a profession which is verbose in unnecessary explanation of the obvious; which delights in the cacophony of technical jargon; which talks of "palms of the hands" and "soles of the feet," yet curiously enough, never of "teeth of the mouth."

It is a mistake and certainly a sin to try to influence an author's style. If all papers were to conform to the same pattern of literary composition, medicine would be not only difficult—it would also be deadly dull. Why are medical writers today so scared of a little humour? Is it too late to be ambitious and emulate such delicious pearls as Osler's charming description of "the area of abdominal romance where the head of the pancreas lies folded in the arms of the duodenum," or Oliver Wendell Holmes's priceless reference to the ischial tuberosities as "those interesting prominences whereon man sits to behold the works of creation," or his inimitable comparison of a sweat gland with a fairy's intestine?

"Nothing like a little judicious levity." The title of this paper is taken from the book

The Wrong Box, written in 1892 by Robert Louis Stevenson and his stepson, Lloyd Osbourne. A little judicious levity! To define one's terms is most urgent and most salutary. According to the Oxford Dictionary, levity is "unseasonable jocularity," but I shall use the meaning which it had for the great Dr. Johnson—"trifling gaiety."

The language of modern medicine is becoming too precise and prosaic, saturated with technical minutiae. Surely the spirit of our time calls for a lighter and crisper touch. I do not suggest for a moment that the *Journal of the American Medical Association* should read like the *New Yorker*, or a textbook of diagnosis like *Tales of Mystery, Detection and Horror*. I do not suggest for a moment that we should resurrect the scurrility and invective beloved of medical journalists a century ago. Those who have been medical students or are teachers of medical students, will appreciate the value of a little judicious levity in the arid atmosphere of the lecture-theatre, with this proviso that it is used to spice teaching, not to dilute it. Hence my insistence on the qualification "judicious." Some subjects, of course, lend themselves much more readily to the humorous touch than others—for example, obstetrics, where, as an anonymous writer in a recent issue of the *British Medical Journal* (August 29, 1953, *ii*, 483) reminds us, "the single-handed problems of birth may be stamped on the student's mind by presenting them in outlandish surroundings, so that he sees himself sharing a rowing-boat with a woman in labour, or galloping by camel to attend a tented delivery in the alarmingly underdoctored stretches of the Sahara."

It may legitimately be argued that this is all very well for the spoken word, but is not medical humour apt to congeal in the coldness of print? Again I underline the word *judicious* in the title of my paper.

That great surgeon and writer, Sir Frederick Treves, for several years lecturer on anatomy at the London Hospital, excelled as a teacher of this subject, for his was a

lucid, nimble style, a genius for the telling, facetious, pungent phrase, which stuck in the student's memory. This was his delightful comment upon the bony deposits on the surface of the skull in hereditary syphilis. (I quote from the sixth edition of his *Surgical Applied Anatomy*, 1911):

"They have been termed "natiform elevations" by M. Parrot from their supposed resemblance, when viewed collectively, to the nates. To the English mind they would rather suggest the outlines of a "hot-cross bun".

Alas! this crack is omitted from the eleventh edition, 1947.

Read, also, a few extracts from "A Study of the Umbilicus," by O. H. Mavor, *alias* "James Bridie" (*British Medical Journal*, 1939, *i*, suppl. 245-8):

"In anatomy . . . it [the umbilicus] is little better than a mere landmark. When we assume the spectacles of the embryologist, however, it takes on great importance. If one may be allowed a poetical image, it is all that remains of the stem that bound us to the parental stalk. It is a reminder that we have been plucked and must sooner or later die. It might be said that when the stem is severed we cease to live in any true sense. We may be ornamental like roses or useful like cabbages, but only for a little. Our dissolution has begun."

"I wish to draw your attention to the sonority of the word "omphalos," and to regret . . . that Celsus thought fit to change the noble-sounding name of a noble organ to the pedestrian word "umbilicus." We in the profession of medicine are children of Hippocrates the Greek in more than one sense. The magnificence of the Hippocratic language helps to preserve for us what little influence we have in the imaginations of mankind."

While on the subject of anatomy, it may be appropriate to refer to the "judicious levity" of anatomical mnemonics, pornographic or otherwise, beloved of student and teacher alike, such as "Treves is an excellent surgeon, especially in piles," and "Some inherit money, others inherit syphilis, God is love."

I know some better ones, which I shall judiciously refrain from reciting.

Continuing in this vein of judicious levity, Lord Moynihan, wishing to impress upon his students that in haematemesis the stomach is not always the responsible party, graphically put it thus:

"The stomach is so sensitive an organ that it cannot refrain from weeping when its neighbours are in trouble, and its voice may be so loud and insistent as to drown that of the real sufferer."

F. G. Crookshank (*Individual Diagnosis*. London: Kegan Paul. *Psyche Miniatures*, 1930, 66-7), referring to the circulation through the liver and the secretion of bile being affected by chagrin as is the secretion of tears by grief, and to continued emotional stress leading to structural changes in the liver and to the formation of gall-stones, pens this vivid passage:

"The liver has made a series of grimaces, and has been "struck so." So did the grin of the Cheshire Cat remain in Wonderland even when the cat had vanished. So, too, does the fleeting blush of maidenly modesty, if too carelessly evoked, pass into rosaceous grog-blossoms at the climacteric."

Truly has it been said that, for writing to be really effective, in every sentence should lurk the ambush of the unexpected.

"Nothing like a little judicious levity." I have come to the end of my story. I do not delude myself for a moment that I fit into the thought expressed in Hebrews *xii*, 2: "Be not forgetful to entertain strangers: for thereby some have entertained angels unawares." Let me instead echo Shakespeare's lines:

"Let me play the fool:
With mirth and laughter let old wrinkles come.
And let my liver rather heat with wine
Than my heart cool with mortifying groans.
Why should a man, whose blood is warm within,
Sit like his grandsire cut in alabaster?"

COLLEGE PRIZES

HAYWARD PRIZE

1952 Awarded to C. W. H. Havard

1953 Awarded to A. S. Wint

MEDICAL PRACTICE IN THE BRITISH WEST INDIES

by J. E. A. BOUCAUD

THE British West Indian colonies are included in an area between 58°—89° longitude and 1°—20° latitude, and include British Honduras and British Guiana, which are on the mainland of America. All the colonies lie within the tropical belt, and with the exception of British Guiana, which has an Atlantic seaboard, they enclose the Caribbean Sea. The islands include the two large islands of Jamaica and Trinidad and the eastern group of the Antilles, divided into the Leeward Islands and Windward Islands. Barbados and Jamaica have been British since the seventeenth century, but most of the others have had changes of ownership which left traces of their influence as shown by the variety of customs in these "jewels of the west," as the islands are called.

These colonies enjoy great climatic advantages over other tropical parts, as the normal tropical heat is tempered by the prevalent winds and the cooling effect of the sea on small masses of land. Even in British Honduras and British Guiana the temperature is fairly equable. Rainfall is generally abundant, and periods of drought are seldom prolonged sufficiently to affect adversely the health of the people. The islands are really able to boast of natural characteristics and health conditions particularly favourable for countries within the tropics.

Owing to the economic conditions existing in the early days, it was realised that some sort of medical assistance had to be provided for the poor people, and so each colony had to provide a medical service according to its financial position. The aim was to provide free service for the poor and service for others at moderate fees. Necessarily most of the medical officers were Government expatriate officers, and their salaries were supplemented by private practice, which was permissible to all officers except those attached to institutions. There were few private practitioners in colonies where there was East Indian immigration, so provision had to be made for the medical care of the immigrants.

The history of medical practice in the West Indies may be illustrated best by reference to one colony in particular, and I select Trinidad, as it is my homeland and I know much

more about it than any other colony. It was in the year 1814 that a medical board was created in Trinidad to assist the Government in controlling the practice of medicine in the best interests of the community. In 1846, an amending Ordinance was passed authorising the board to control not only the practice of medicine and surgery but also the practice of pharmacy and midwifery. In 1848, a General Board of Health was instituted, and in 1869 this board was reconstituted with the Governor as president, the other members being two members of the Legislative Council, the mayors of Port of Spain and San Fernando, and two members of the Medical Board. The new Ordinance also provided for a medical officer of health and two sanitary inspectors (laymen) for the boroughs. The wardens were *ex officio* sanitary inspectors of the various wards. All medical officers on the fixed establishment, about eight, were responsible solely to the Governor. In 1871 a chief medical officer was appointed and he had to assume control of all medical personnel and medical institutions. The institutions were a leper asylum, opened in 1845, a Port of Spain hospital, transferred to its present site in 1857, a mental asylum opened in 1858, and a San Fernando hospital opened in 1860. A Port of Spain hospital was functioning for some time prior to 1857. When East Indian immigration was introduced in 1845, estates made their own arrangements with private practitioners for the medical care of immigrants. As the result of a protest from the India authorities, the Government decided to assume responsibility for the medical care of immigrants and authorised the chief medical officer to formulate a scheme to meet the existing conditions. After very careful study he formulated his scheme in 1875 and this was accepted. The scheme called for the employment of whole-time medical officers to render medical care to all indentured labour in the various districts, and to all the sick poor, as well as provide medical attendance for all Government institutions, the police and prisoners. It also called for the appointment of medical officers in administrative charge of all institutions. To implement this scheme medical officers had to be recruited from abroad, but the number so recruited

diminished from year to year. Up to the year 1903, attention was focused on curative medicine, but with the appointment of a sanitary inspector and assistant medical officer of health with a Public Health Diploma, ankylostomiasis got some attention, as well as malaria. An extern maternity department was established in 1918, and a voluntary organisation, a Child Welfare League, was founded in 1918. From then on public health activities were not confined solely to the prevention of infectious disease, as this was taken care of by the 1915 Public Health Ordinance. This provided for the revision of the constitution of the Central Board of Health and the local health authorities in the urban and rural sanitary areas, and also the Port Health Service. The Ordinance provided for a drive on preventive medicine, which proved of immeasurable benefit to the colony and this drive continues to-day. From 1919 onwards, both curative and preventive medicine received the attention of the authorities, but the progress in surgery, where the standard was high, was much greater than the progress in medicine. The training of nurses was arranged for at the two main hospitals in the colony on lines similar to the training in the United Kingdom, but for quite a long time girls were not attracted to it. The general scheme formulated in 1875 continued in force up to 1934, the year of publication of the report of a committee appointed to consider re-organisation of the service. The recommendations of this committee were far reaching, but implementation slow. The venereal diseases scheme, organised in 1937, was stepped up in 1943; the maternity and child welfare scheme for the colony was initiated in 1942, and arrangements were in progress for a tuberculosis survey in the colonies.

Although in 1938 a five-year development programme was drawn up in Trinidad and provision made for a good start in the development of the health service, it was not surprising that the Russell Committee appointed in 1943 were able to record that little progress was made from 1939 to 1943. The committee stated that while on the public health side are to be found the usual activities associated with a colony of this size and that in this respect the health department worked on approved lines, there was no definite stated health policy. It must be noted that these colonies are not able to bear at all times the cost involved in implementing recommenda-

tions of committees, but what was always lacking, until more recently, were stated policies, although there was the guidance of a Colonial Medical Advisory Council composed of senior officers, all of whom had been at one time in active service in the colonies. The Russell Committee, among other things, recommended:

1. Improved administration of the service.
2. Enlargement and modernisation of the general hospitals.
3. Appointments of lay secretaries to hospitals, almoner, dietitian and specialists.
4. The erection of a sanatorium.
5. Increases in medical and nursing staffs.
6. Improved district services.

As all these committees are of interest to all colonies, the reports are carefully studied with a view to improving conditions all round, and so the colonies were generally prepared for the findings of the Moyne Commission.

The Moyne Commission, appointed in August, 1938, conducted investigations in the colonies in 1938 and 1939, covering a wide field. The report of the Commission was presented to Parliament in June, 1945. The chief recommendations affecting health departments were: the appointment of a medical adviser to the Controller of the West Indies Welfare Fund, to formulate health programmes for the West Indies and the creation of at least one school of hygiene in the West Indies. The Commission urged the formulation of long-term policies, stressing the importance of preventive medicine in the West Indies and urged immediate progress with housing, general sanitation, and the control of malaria and venereal diseases. The Commission recommended unification of the medical services in the West Indies and re-organisation of the services with provision for a relative increase in well-trained auxiliary staff, the centralisation of medical institutions, and provision of better facilities for treatment in rural areas and certain sections of the urban population. The organisation of maternity and child welfare schemes, school medical services, and health education schemes were also recommended. The Commission stated that the aim should be to secure greater efficiency and economy in the treatment of the sick, and render possible better training facilities in curative medicine, for all medical personnel.

In 1947, the future of the West Indian medical services was considered at a conference of directors and senior medical

officers at Barbados under the chairmanship of the medical adviser to the Controller of the West Indies Welfare Fund. At this conference certain principles were laid down, and a scheme submitted for the guidance of the colonies. It was felt that the administration of the health services in the different colonies should be established on similar lines, and that there should be an attempt at unification and at centralisation of institutions.

It is impossible to make the best use of the well-trained, efficient and keen professional men in these colonies, for the good of all communities. Each colony has its own medical service, its own system of registering practitioners and its own general hospitals. Each hospital has at least one surgeon, and he may be required to do other duties besides that of a surgeon. The larger colonies have some special hospitals, and their general hospitals have the various departments associated with general hospitals in the United Kingdom. The facilities offered in these general hospitals are good, and the material available excellent, but work is handicapped for lack of personnel. So much is demanded of these officers that there is very little opportunity for research in spite of the wonderful material available. With the introduction of more auxiliary staff, the position is better, but with populations of these colonies continually on the rise, it is difficult to notice much change. There are opportunities for specialising in some branches, but the specialist cannot give his service, wherever needed, due to lack of adequate communication between all the different colonies. It is difficult to recruit the personnel required, but with the University College of the West Indies available to supply recently qualified men, and the facilities offered by Government to enable young men to obtain qualifications for the higher posts, the position should improve. It must be remembered, however, that practitioners are not needed only for the service. There are estates, oilfields and other industrial concerns that can absorb many practitioners, and there is private practice, the standard of which is high, for the physician, the surgeon and the specialist, who may have the use of nursing homes in the larger colonies. There are, therefore, varied opportunities for enthusiastic practitioners, but as the tendency is to enlarge the services and grant greater facilities than formerly, a career in the services should prove more attractive.

At the present time the colonies can boast of:—

1. Large modern general hospitals, with facilities for the physician, surgeon and specialist, and modern laboratories attached.
2. Special hospitals for mental diseases.
3. Special hospitals for the aged.
4. Special hospitals for tuberculosis.
5. Special hospitals for leprosy.
6. District hospitals in rural areas.
7. Chest clinics and health centres.

It must be admitted that the hospital accommodation available is not adequate for the population of the West Indies, but this fact has been noted by the planners who aim at providing more beds.

Great progress has been made in preventive medicine, with the result that the working capacity of the inhabitants has improved considerably and with this the economy of the colonies, especially the more prosperous where living conditions are better. The good results of the health education drive are now visible and the interest of the inhabitants in protection against disease, in good nutrition, good housing, and generally good living conditions, is very encouraging, not to mention the great concern of the poor to-day for the welfare of their children, and their eagerness to co-operate in efforts made to help them by the various social services existing as well as by the health department.

The colonies can look back with satisfaction on the results of the D.D.T. campaign against malaria, the intensive campaigns for the control of ankylostomiasis, the widespread fight against venereal diseases, the re-organisation of the Port Health Services, the tightening up of the quarantine regulations and the recent B.C.G. campaign. The efforts made to maintain a high standard of sanitation in these colonies have not been made in vain. Though it is not possible to say when all the recommendations of the Moyne Commission will be implemented it can truly be said that the present interest of the people in these areas in preventive medicine is due to the enlightenment of the people by the Moyne Commission which revealed the necessity for the health education and generally improved sanitation, as also for the unification of the medical services in the West Indies. This should render more easily available to all communities the specialists and modern institutions to be found in the larger colonies. These colonies can look forward with confidence to steady progress in both curative and preventive medicine.

WILFRED SHAW

by JOHN BEATTIE

Wilfred Shaw has been taken from us at an early age and at the height of his powers. He was not yet 56 years old and suffered a very long illness before he died. His scholastic career was exceptional from the beginning; from King Edward's School at Birmingham he went to St. John's College, Cambridge, with a Foundation Scholarship and Exhibition and he won the Wrights Prize. He obtained a first-class Honours in the Natural Science Tripos, and then came up to St. Bartholomew's. He had a brilliant career at the hospital both as a student and afterwards, and won the Shuter Scholarship and the Matthews Duncan Prize and Gold Medal.

He qualified in 1921 and was house surgeon to Sir Charles Gordan Watson when he began to show great promise in surgery. He became a F.R.C.S. (Eng.) in 1923 and took his M.D. at Cambridge in 1928 and was elected F.R.C.O.G. in 1932 and was a foundation member when the College was first named. The Royal College of Obstetricians and Gynaecologists recognised his outstanding knowledge of gynaecological pathology by making him a member of the Museum Committee.

He was a one-time examiner at the Universities of Oxford, Cambridge and London, also for the Conjoint Board and for the M.R.C.O.G. degree.

After doing his house appointments, Wilfred Shaw began to study gynaecology and obstetrics in Vienna, Berlin, Gratz and Munich. He established an association between the Frauen Kliniks in Vienna and this hospital which has lasted until the present time. Two young gynaecologists of First Assistant status have visited this hospital this year and one of our Registrars has just returned from Vienna.

Shaw was the first to hold the post of Resident Physician Accoucheur and resided for four years in a flat in Surgery House. During the whole of this time he devoted his great energies to the study of ovarian and uterine physiology and pathology. He began to publish a long series of papers on the following subjects: metropathia haemorrhagica, the histological changes in the uterine wall associated with multiparity, ovarian tumours,

the Shaw-Dastur cells of the ovary, the anatomy of the pelvic floor, a new operation for stress incontinence and a new method of repairing pelvic floor prolapse. The Williamson Laboratory, which is endowed and forms part of the Gynaecological and Obstetrical Department, was organised and raised to a high state of efficiency by Wilfred Shaw. The department owes him a very great debt for his brilliant work, his great example, and the guidance of his junior colleagues ever since he took charge of the laboratory.

Shaw won at Cambridge, in 1929, the Raymond Horton Smith Hartley Prize for the best M.D. thesis of the year and previously he obtained the Lawrence Research Scholarship and Gold Medal and the Cattlin Research Scholarship at the hospital.

He was elected Assistant Physician Accoucheur in 1930, and after Dr. Barris died and Dr. Donaldson retired he became Surgeon-in-Charge of the department. Even when his private practice occupied his time outside the hospital he continued to do research work on various problems, for he was a relentless worker. He was really at his happiest while doing practical work in the laboratory and each of his published papers had the stamp of individuality and originality. His two textbooks, on gynaecology and on obstetrics, were an immediate success, the one on gynaecology having already reached its fifth edition. These books have a wide circulation and have reached many countries. More recently he wrote a large textbook for nurses, which has also gained a well-deserved popularity. Shaw's international reputation produced a wide correspondence and he had many visitors from abroad, particularly from Europe, America, Canada and India.

During the 1914-18 war, Wilfred Shaw saw active service as a surgeon-probationer and had a good deal of experience in a destroyer. When the 1939-45 war broke out he did not join the E.M.S. but was asked to take control of a Maternity Unit in Bradford on Avon, where he did most excellent work. The long series of cases which he had under his own care proved conclusively that the doctrine of non-intervention in obstetrics, of which he was such a protagonist, is the safer course to adopt. He was also obstetrical and gynaeco-

logical adviser to a wide area around his hospital and his work was greatly appreciated by many doctors in the neighbourhood.

Shaw's brilliant brain was not satisfied to concentrate only on his professional work. He took a great interest in astro-physics, English history and the history of St. Bartholomew's. His students always had the benefit of his acute observation. His method of teaching was very individual and discussion was apt to range wide and far to include any subject under the sun. His memory was prodigious for he never forgot a face, either of his students or patients. He could relate the minute detail of past history in both

But although he was so happy when working at his chosen subject, Wilfred Shaw was never happier than when at home with his family around him. In later years he became fascinated with horticulture and did a great deal of fruit tree grafting, which was his special interest. It was typical of the man that he was very critical of a belt of pine trees near his garden in Essex because he thought they must be hosts to many a virus which attacked his fruit! He quickly attained specialised knowledge about plant hormoneology and biology which his restless brain applied to his hobby.

His friends will like to remember Wilfred



student and patient many years after his first contact with them, which the qualified Bart.'s man found disconcerting on occasions!

Thousands of Bart.'s men will continue to remember Shaw as "Wilfred," for he was always referred to by his Christian name. Many legendary stories are associated with him, for his quick wit and repartee were famous.

His technical ability as a surgeon was very high indeed and his original mind was always searching for a new technique. Many came to watch him operate and his boldness under difficult circumstances was the envy of all his juniors.

Shaw remaining true to his ideals even during his recent illness which lasted for two years. During this time, and indeed quite recently, he insisted on continuing to write and correct the proofs of his new book on operative gynaecology, which is now in the press. This book should be a memorial to Wilfred Shaw, and for those who knew him intimately it will be something else as well—it will be in memory of a man whose original thought, whose publications, whose tenacity of purpose and clear thinking have left their mark not only on those here but also upon many hundreds of Bart.'s men who since 1923 have been taught and guided by him.

THE PSYCHIATRIST

by M. L. HORTON

"I fear," he sigh'd, "you've moths in what you're pleased to term a
'brain';

"But dry that tear! Some insulin will put you right again."
Yet insulin is little use, as every dormouse knows,
To one whose disposition's predispos'dly comatose.

"Bear up!" he cried, "some ECT may work your preservation
(If I'm not foil'd by some untimely power cut from the station)."
But I'd been in a Home for months, and after shocks like these
A thousand volts of ECT could only make me sneeze!

"Tut! Tut!" said he, "some horrid past befouls your mental drain;
Some truth-compelling pentothal must flush it clear again."
But when, 'neath pentothal, I cast politeness on the shelf
The only truth I told him was the truth about himself!

"Enough!" he roared, "my constitution will withstand no more,
And though it hurts me more than you, I'll kick you through the door.
You ought to know that honesty confounds the learned brain;
Stop treating me with painful facts before you drive me sane!"

But next time he commands, "Now tell me in the briefest manner
The symptoms you imagine," I shall seize a heavy spanner;
And, wasting no more time in pleas, or vain expostulation,
I'll yell, "I'm homicidal, sir!"—and give a demonstration!"



JOURNAL APPOINTMENTS

The posts of Assistant Editor and Assistant Business Manager are both vacant.
These positions are best filled by Students in their first Clinical Year.

PSEUDO-CHOLINESTERASE

by H. LEHMANN

1. The two cholinesterases of human blood :—
 - (a) True cholinesterase.
 - (b) Pseudo-cholinesterase.
2. Differences between true and pseudo-cholinesterase.
3. Determination of pseudo-cholinesterase, normal values.
4. Determination of pseudo-cholinesterase as a liver function test.
5. Specificity of the test for liver function.
6. Pseudo-cholinesterase determination in myasthenia gravis.
7. Pseudo-cholinesterase and anaesthetics.
8. Possible physiological function of pseudo-cholinesterase.

The cholinesterases of human blood

Acetylcholine is an ester which is hydrolysed by enzymes to acetic acid and choline.

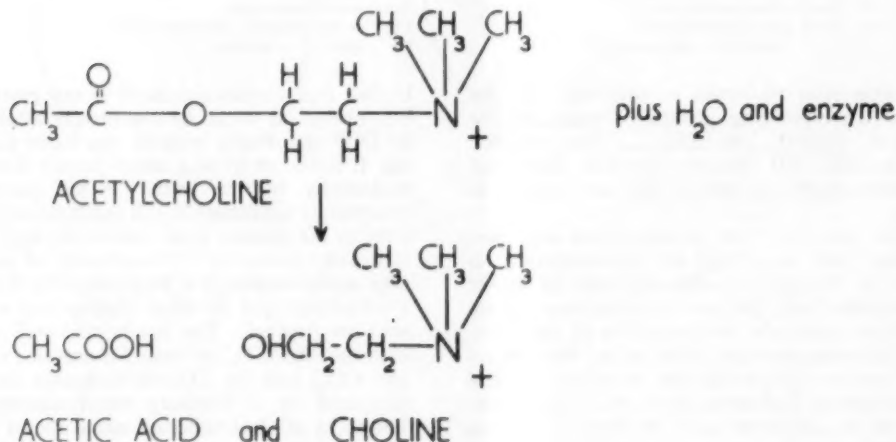
True cholinesterase

Human blood contains two enzymes which are capable of splitting this compound. One is found in the red cells and is identical with the cholinesterase of the neuronal surfaces which is particularly concentrated in synaptic regions and at neuromuscular junctions.

acetylcholine are directly connected. What purpose the "true cholinesterase" of the red cells fulfils is unknown, but as its concentration in the blood rises and falls with that in the nervous system, measurement of the true cholinesterase of the red cells will give an indication of the cholinesterase activity of the nervous system.

Pseudo-cholinesterase

The second cholinesterase is in the plasma



There the enzyme plays an essential part in the transmission of nerve impulses with which the release and the removal of

and is called "pseudo-cholinesterase" because it has only little effect on acetylcholine at physiological concentrations, and is

therefore not involved in the transmission of nervous impulses. Unlike the true cholinesterase it hydrolyses not only choline-esters but also shows considerable activity against non-choline compounds such as tributyrin or ethyl acetate. (The plasma also contains an enzyme which can attack aliphatic esters only, and no choline-esters at all—the "ali-esterase".)

Differences between true and pseudo-cholinesterase

The true and the pseudo enzyme differ in their attachment to the substrate. Both have an active grouping which combines with the ester linkage of the substrate. The true cholinesterase however has also a negatively charged grouping which must combine with the positively charged group of the choline-ester before the enzyme can act. Hence the true cholinesterase will not attack non-choline compounds. If the substrate concentration becomes too high true cholinesterase—but not pseudo-cholinesterase—becomes inhibited. If too many choline-ester molecules compete for the two active groups of the true cholinesterase molecule there is less chance for both active groups of one

suppression of pseudo-cholinesterase activity, yet no ill effect or any symptoms of acetylcholine accumulation will be noted, because the inhibitory level for true cholinesterase has not been reached.

Lastly, there are differences also in the activity of the enzymes against different choline-esters. Only true cholinesterase can hydrolyse acetyl-beta-methylcholine, and only pseudo-cholinesterase can act on benzoylcholine. The pseudo-cholinesterase is therefore characterised and differentiated from the true cholinesterase by:—

1. Ability to act both on choline-esters and on certain aliphatic esters.
2. Absence of the self-inhibitory effect of high substrate concentration.
3. Greater sensitivity to the organic phosphate anti-cholinesterases DFP, TEPP, Parathion, tri-ortho-cresyl phosphate.
4. Inability to hydrolyse acetyl-beta-methylcholine and by its hydrolysis of benzoylcholine.

Determination of pseudo-cholinesterase, normal values

The role of plasma-cholinesterase in human metabolism is not fully understood.

DIFFERENT NAMES OF THE TWO HUMAN BLOOD CHOLINESTERASES

TRUE CHOLINESTERASE.

Specific cholinesterase.
Acetylcholine esterase.
Aceto-cholinesterase.
Red cell cholinesterase.
"e" type (e = erythrocytes).

PSEUDO-CHOLINESTERASE.

Non-specific cholinesterase.
Cholinesterase.
Butyro-cholinesterase.
Plasma (or serum) cholinesterase.
"s" type (s = serum).

choline-ester molecule to combine with the two corresponding groups of one and the same enzyme molecule. The enzyme molecules will become blocked with half combinations on which they are unable to act.

In vitro the true cholinesterase acts best when the acetylcholine concentration is $3 \times 10^{-3} M$ and becomes inhibited by higher concentrations, pseudo-cholinesterase has an infinite optimum concentration of substrate.

Both enzymes are inhibited by small doses of eserine (physostigmine, neostigmine) but the pseudo-cholinesterase is much more sensitive to inhibitors such as percarine, certain sulphonamides, and organic fluorine and phosphorous compounds such as DFP, TEPP and Parathion, some of which are used as insecticides, or tri-ortho-cresyl phosphate which has an industrial use as a plasticiser. DFP (di-iso-propyl-fluorophosphate) can be injected at a dosage sufficient for complete

Unlike true cholinesterase it is not essential for survival as it can be completely inhibited by DFP apparently without any harm accruing. It is known to be a muco-protein formed exclusively by the liver. After complete removal by inhibitors it will reach its original level in the plasma again within 10 days. It is usually measured by incubation of serum with acetylcholine in a $NaHCO_3/CO_2$ buffer. On hydrolysis of the ester, choline and acetic acid are formed. The acetic acid will react with the $NaHCO_3$ to form Na-acetate, water and CO_2 , and the CO_2 development can be measured in a Warburg micromanometer. The units of cholinesterase equal the μl CO_2 liberated by one ml. plasma or serum in 1 min. at $37.5^\circ C$. The measurement by the Warburg technique is cumbersome and a number of alternative methods have been described; none of them has as yet been found to be as reliable and accurate. The normal level in human adults varies between

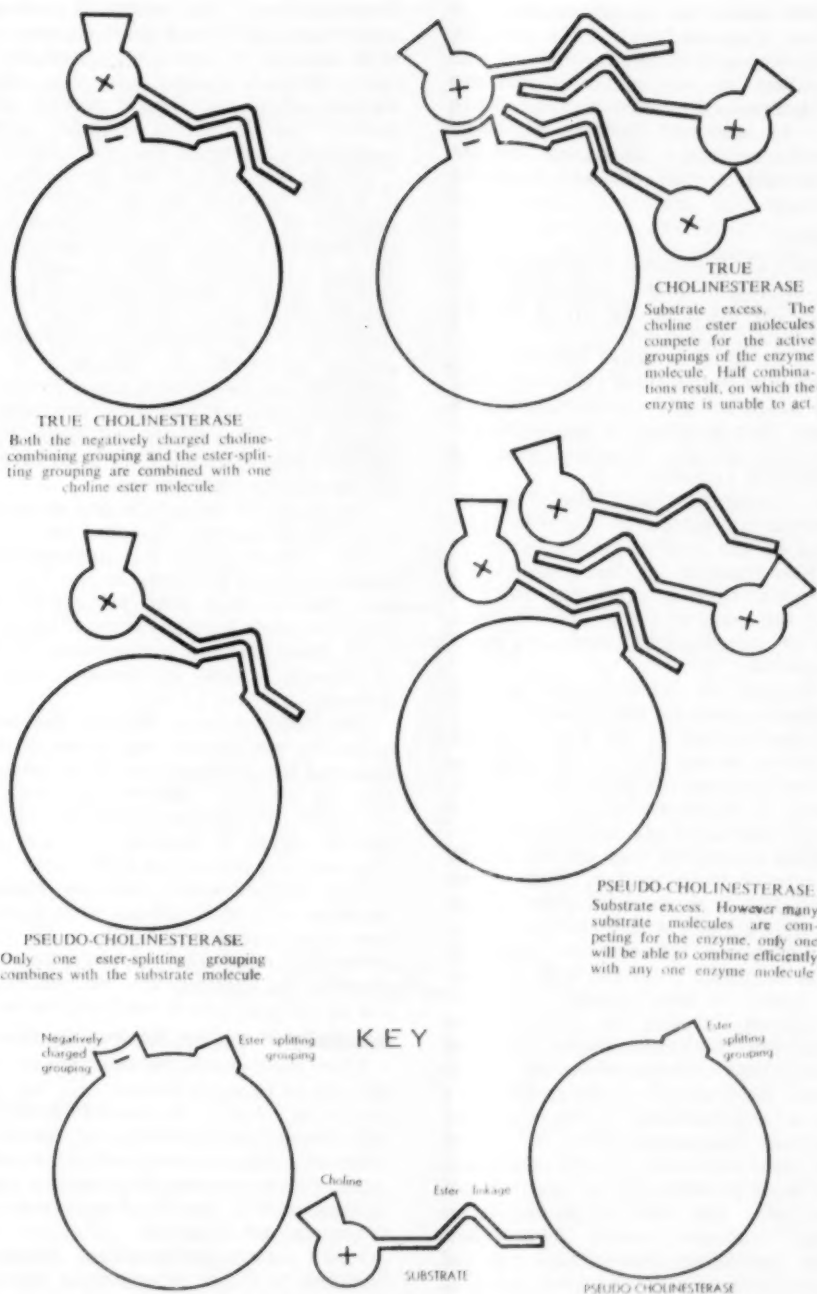


Fig. 1. Combination of true and pseudo-cholinesterase with substrate-inhibition of true cholinesterase by high substrate concentration.

65 and 110 units, but an abnormally low level is not diagnosed unless the value is below 55. Although there is a wide range of normal values, in any one individual the plasma cholinesterase level is remarkably constant. In new born children the levels found are the same as in adults, but they are higher in early childhood and lower in advanced age.

Liver disease

As plasma-cholinesterase is produced exclusively by the liver the measurement of pseudo-cholinesterase in the blood can be used as a liver function test.

There is no more sensitive test for function of the liver parenchyme; the only other two tests which actually examine liver function rather than dysfunction are the determination of serum albumin and of bromsulphalein excretion.

Serum albumin like the pseudo-cholinesterase is produced by the liver exclusively and its fall will be an indication of lowered liver function. As the quantity of a protein rather than a catalysing effect is measured, the range of values and the determination of significant differences is much more restricted.

The removal of intravenously injected bromsulphalein from the blood stream is also an exclusive function of the liver. As the bromsulphalein is excreted into the intestines through the common bile duct, the test cannot be used on jaundiced patients; the back pressure in obstructed liver ducts would prevent efficient absorption from the blood even if there was no liver damage. Some of the bromsulphalein is re-absorbed from the gut and this may explain why there is no satisfactory correlation between the degree of failure to disappear from the blood stream and the extent of liver damage. Another serious difficulty in using the test is that the amount of bromsulphalein removed from the circulating blood will depend on the minute volume of the liver circulation. If this is lowered as in circulatory failure, abnormal retention of bromsulphalein will occur although the liver may not be damaged. Many a heart patient with a hardened and enlarged liver has been diagnosed as a "cirrhotic" on the results of a bromsulphalein test before this parallel with the pre-renal uraemia in circulatory failure was appreciated.

The writer has to admit that he is somewhat prejudiced against bromsulphalein.

When he used it first, some 10 years ago, a patient washed himself after the test with a very alkaline war-time soap, and the indicator changed its colour *in vivo*. As the medical officer was then a captain and the patient—red all over—a brigadier, some uncomfortable moments were experienced.

The measurement of pseudo-cholinesterase as a liver function test has been refined by injection of DFP which removes all pseudo-cholinesterase. In a normal individual the original level will be restored within 10 days and the slope of the recovery will be a very delicate indication of the liver function. Although it has been emphasised that DFP at low dosage has no ill effect, it seems doubtful whether it is justified to inject an anti-cholinesterase into a patient with liver damage and up to the present simple pseudo-cholinesterase estimation seems to have given all the required information.

The principal uses of the test as employed at St. Bartholomew's Hospital are:—

The follow-up of the improvement or deterioration of cirrhosis of the liver. The test was in fact first introduced at St. Bartholomew's Hospital at the request of Mr. A. H. Hunt to enable him to assess the results of venous shunts in patients with liver damage.

The differentiation between the jaundice caused by mechanical obstruction of the bile duct and the jaundice seen in the obstructive phase of hepatitis. If there is a recent history of jaundice the results will be quite clear cut: normal values in the true obstructive jaundice and very low values in hepatitis.

The differentiation between haemolytic jaundice with and without liver damage in new born infants. As the need for this differential diagnosis does not arise very frequently, the experience is not yet extensive but as far as it goes it has been encouraging.

Specificity of the test for liver function

Liver function can be lowered not only by damage to parenchymatous cells but also by starvation. Just as the plasma albumin level falls in malnutrition because the material from which the liver manufactures albumin is missing, so pseudo-cholinesterase can only be produced if the food intake and food absorption are adequate.

Low pseudo-cholinesterase values will therefore be found in prolonged disease, but unless there is gross starvation the values will only be slightly below normal. Thus if in a jaundiced patient with carcinomatosis

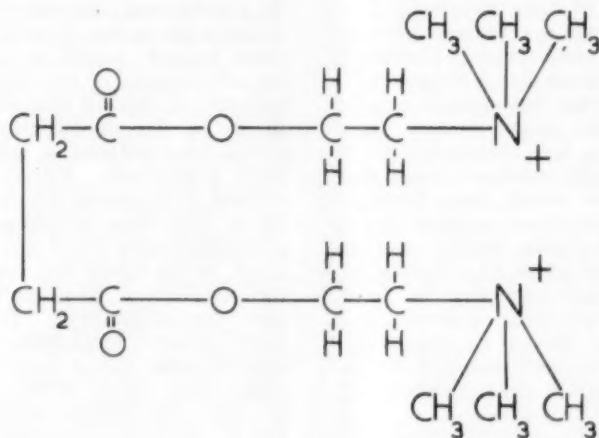
and with a history of chronic illness and under nutrition a pseudo-cholinesterase value of 40-55 is found, it is unlikely that the liver is specifically affected, if the value is 30 or below it can be assumed with great likelihood that there is liver damage.

Very severe anaemia can lower pseudo-cholinesterase values. Here again there is a much less pronounced fall of the enzyme level than that seen in a liver disease of similar gravity. A slight fall noted in mild anaemia can be correlated with the expansion of the plasma volume and if corrections are applied for a lowered haematocrit value it will be noted that the quantity of circulating pseudo-cholinesterase is in fact normal. It seems that the liver produces a certain amount of the enzyme per day and if the blood cell volume falls and the plasma

the cholinesterases but in the body it is gradually transformed into a powerful anti-cholinesterase which by a stoichiometric reaction removes both the true and the pseudo-cholinesterase. The gradual *in vivo* hydrolysis of OMPA makes it a suitable "depot" therapeutic. Pseudo-cholinesterase determinations will help in establishing the maintenance dose and will have to be repeated from time to time to check whether the level of pseudo-cholinesterase remains lowered to just the desired extent, not too much and not too little. As both the true and the pseudo-cholinesterase are affected by OMPA, it suffices to estimate only one of them.

Anaesthetics

A particularly useful muscle relaxant is succinylcholine. It has a short-lived effect,



SUCCINYLDICHOLINE

volume rises the pseudo-cholinesterase circulates at a lower concentration.

Myasthenia gravis

The muscular weakness of myasthenia gravis resembles the paralysis seen in curare poisoning. Anti-cholinesterases restore the transmission of nerve stimuli to the muscles in both conditions, and the compound used in myasthenia gravis is neostigmin. This is a short-acting drug and recently another "anti-cholinesterase" OMPA (octamethyl pyrophosphoramidate) has been recommended. OMPA by itself has no inhibitory effect on

and is a suitable relaxant for intubation, electro convulsion therapy and short orthopaedic procedures. It has been found that the brevity of its action is due to its rapid destruction by the pseudo-cholinesterase, and in fact there is a direct relationship between the duration of the effect of a given dose of succinylcholine and the pseudo-cholinesterase level. In patients with very low pseudo-cholinesterase level succinylcholine produces a prolonged apnoea and injection of the enzyme can counteract this.

Research in the effect of pseudo-cholinesterase on succinylcholine has had

some interesting results. It was found that succinylcholine inhibited the true cholinesterase and it was suggested that its action was due to this chemical inhibition as well as due to its well-known physical effect of depolarising the nerve end plates. This unorthodox view was supported by findings in dogs where succinylcholine is a much more powerful relaxant than in man. It was found that the only difference between the enzymes of the blood of man and dog was a much lower level of true cholinesterase in dog, and the most likely explanation was that in fact the chemical inhibition of true cholinesterase was an essential part of the relaxant action of succinylcholine. Since then this chemical effect of muscle relaxants has been fully elaborated as a fact by pharmacological experiments elsewhere, and is now considered to be as essential as the depolarising action of these compounds.

Succinylcholine is not broken down to succinic acid and two choline molecules directly, succinylmonocholine is formed as an intermediate. This ester was noted to inhibit, like succinylcholine though at very much higher concentration, true cholinesterase. It was also destroyed by pseudo-cholinesterase though much more slowly than succinylcholine. It was therefore assumed that it might be a longer-acting muscle relaxant which could, if need arose, be counteracted by injection of pseudo-cholinesterase. This scheme worked satisfactorily in rabbits, but although a suitable relaxant in man, for a hitherto unexplained reason injection in man of pseudo-cholinesterase did not counteract the succinylmonocholine effect.

Working still with the same hypothesis that a choline-ester was a relaxant if it inhibited true cholinesterase, and that the duration of its effect was dependant on the speed of its destruction by pseudo-cholinesterase, benzoylcholine was used on rabbits. Benzoylcholine is an inhibitor of true cholinesterase and is destroyed at least as rapidly as succinylcholine by pseudo-cholinesterase. It was found that in fact benzoylcholine was a short-term muscle relaxant of equal efficiency as succinylcholine. Unfortunately, benzoylcholine raises the blood pressure in rabbits and although it seems to be free from some undesirable side effects of succinylcholine, great care will have to be exercised if its application in anaesthetics of humans should be considered.

Possible physiological function of pseudo-cholinesterase

From the experiences with succinylcholine and succinylmonocholine which inhibit the true cholinesterase and are in turn destroyed by the pseudo-cholinesterase, we suggested that the physiological function of pseudo-cholinesterase might be that of a protecting enzyme. Pseudo-cholinesterase is always found in close neighbourhood to the true cholinesterase; in the brain it is mostly in the white matter close to the true cholinesterase in the grey matter; in the intestines, the heart, the muscles, everywhere both enzymes are closely associated. It is most likely that succinylcholines and similar esters are formed *in vivo* by enzymes esterifying aliphatic acids. These enzymes are well known to occur in liver and brain, where their action is catalysed by coenzyme A, a compound containing pantothenic acid. A rapid destruction of such inhibitory esters, when formed, would be necessary for the smooth working of the nervous system. The difficulty is that all relaxants to which this theory of the physiological significance of pseudo-cholinesterase is applicable are synthetic compounds. Efforts at isolating any of them from human and animal tissues have up to now been unsuccessful. However, propionylcholine which has a slight relaxant effect in the rabbit has been isolated from the mammalian spleen and is thus a truly physiological substance. *In vitro* it inhibits acetylcholine breakdown by the true cholinesterase (a) at low concentration by competition and (b) at high concentration by the self inhibitory mechanism described in Fig. 1. Similarly acetylcholine, were it ever allowed to reach a high concentration, would of course inhibit the true cholinesterase, and it would then have to be removed by the pseudo-cholinesterase. While there is still much work to be done to explore the theory of the possible protective function of pseudo-cholinesterase we know already at least two physiological compounds: acetylcholine (at high concentration) and propionylcholine (at low and high concentration) which are capable of inhibiting the true cholinesterase and which when formed in excess could produce symptoms of acetylcholine poisoning. The removal of these two esters by an enzyme such as pseudo-cholinesterase would be essential for the orderly progress of nervous transmission.

The author wishes to thank Mr. N. K. Harrison for preparing the diagrams in this article.

WOODLICE? SO WHAT!

by THOMAS HUXLEY

THE daily round of many men brings them at intervals, when a natural function forces them to pause, face to face with a wall upon whose plastered, plastic or papered surface they must inevitably gaze. Not many men are fortunate enough to be able to carry out the research of their choice at the tax-payer's expense. Fewer still are able to carry out their researches at these moments. Yet I am one. The intense satisfaction that I receive and, surely, the tax-payer also were he to know, in being able thus to fill this unfor- giving minute with a hundred and twenty seconds' worth of distance run, has at last found its outlet in your journal's pages.

The wall under consideration is per- manently damp. Minute organisms grow upon it, and upon the minute organisms browses *Porcellio scaber*. By marking these animals with little patches of black paint I may distinguish between individuals and thereby record distance travelled between my visitations. Then for days on end none is seen, until a new individual appears and moves slowly up the wall until it becomes lost from view among plumber's tubing. It would be wrong to cast premature judgment on these mural observations. Here, they merely serve as an admirable introduction, considered alone they must surely point a moral.

When a book-lover looks at a book he might be interested in that book from a num- ber of different points of view. For instance, the binding and the man who bound it, the printer and the different type he used, the kind of paper it was printed upon, or the publishers. Eventually he might think about the author, the edition or the price. Were he also in an expansive mood, he would un- doubtedly surprise most of us with the multi- tude of interesting considerations (quite apart from the *contents*), attending that which lay in and between the covers of a book.

Trusting in your common sense to prevent me from seeming guilty of being described as an *Oniscophile*, I will here note down some thoughts that occur to me when I look upon a specimen of *P. scaber*.

First, I know it to be a woodlouse because it possesses the l.c.d. of all British woodlice, namely, an approximately oval outline with a pair of fairly distinct antennae the tips of which may be delicately touching the sub- stratum, because its back view presents a head apparently hunched up into the shoulders of the segment immediately behind it, because the remaining obvious segments number more than seven, because it is living out of water in the British Isles, and finally because, if I pick it up and look on its underside, I can see that it possesses seven pairs of walking legs. That it is a species called *Porcellio scaber* I may be fairly certain, even from a distance, because of its size (about a centimetre), and its dull grey colour; while closer examination shows that its back is covered with tiny tubercles. Detailed con- firmation of the identification would only require a hand lens.

This leads me on to be thankful that I am working on a group of animals whose gross appearance when seen in the field is highly characteristic and almost entirely unique to themselves, not only to the adults, but throughout their lives. Further to this, there are only 38 different kinds of woodlice in the British Isles and of these I am likely to meet, at the most, less than a dozen. Com- pare this to a man studying a group of beetles. He begins with over three-and-a-half thousand different kinds in the British Isles alone, and he will almost certainly have to make, at least initially, quite an effort before he becomes familiar with the taxonomy of even a small group.

And why is the woodlouse so easy to recog- nise? Answer, by analogy: for the same reason that a wing commander is easy to distinguish when messing in Aldershot. The woodlouse and the wing commander are both out of the element of their close relations.

Woodlice in fact are Crustacea, the majority of whom are aquatic. Woodlice even smell of crab when they die. Often called terrestrial Isopods, they are one of the few Crustacean minority groups that have ventured on land. Crustacea in the sea,

insects on land. Place a Porcellionid among its aquatic Isopod cousins in a museum cabinet and it will look much like all the rest. Among its ecological neighbours it appears distinct. Biology is full of exceptions, but the exception here possibly proves the rule, for a few millipedes, which may be considered as intermediates between Crustacea and insects, look much like woodlice.

The basic requirements for life on land are clearly different, even, one might add, more rigorous than in an aquatic environment. The study of the respiration, excretion and reproduction in woodlice, therefore, must be of interest in demonstrating how a minority group may overcome the difficulties inherent in breaking away from the conservatism of their ancestors. By and large woodlice have done so, it would seem, only by subterfuge, by varying the minutiae of their ancestral characteristics. More than 50 per cent. of nitrogenous wastes are still excreted in the form of ammonia, while nitrogen metabolism as a whole seems to be low. Respiration is still largely carried out by external gills involving the retention of a thin surface film of water over a broad external surface which, along with the poor impermeability of the rest of their cuticle, necessitates that they live in microclimates with high humidities. Some adaptations to terrestrial life have, of course, occurred. A number of species have developed short internal "pseudo-trachea" analogous to those of insects, a few have considerably lowered the permeability of their cuticle as well, and two or three are able to assume a spherical shape at rest, thereby temporarily possessing minimal surface-area/volume ratio, all possible aids to water conservation and survival in a wider range of saturation deficits. Water conservation for the newly hatched, delicate larva, is entirely obviated by retaining the young in a brood-pouch filled with fluid, a brood-pouch which is present in aquatic forms, possibly mainly related there to parental care and protection from predators.

Thinking of the young, I am reminded that when they are first liberated from the maternal brood-pouch, only six of the seven pairs of walking legs are fully developed. And this recalls a famous embryologist's reference to this fact, in support of his belief in the theory that phylogeny (the history of a group) is recapitulated in ontogeny (the development of the individual). His reference, in its turn, led Walter Garstang to write his

delightful little verse, *Isopod Phylogeny*,* the last stanza of which runs:

"Machbride was in his garden settling pedigrees,
There came a baby woodlouse and climbed upon his knees,
And said: "Sir, if our six legs have such an ancient air,
Shall we be less ancestral when we've our mother's pair?"

Then suddenly one becomes conscious of the debt that nearly all these thoughts owe to Charles Darwin, whose impressive presentation before the public eye of the plausibility of organic evolution hastened the revelation of a logical skeleton in biology upon which to fasten the flesh of fact.

But are not woodlice too trivial to merit attention? Who can tell? One can only agree that "the doing what little one can to increase the general stock of knowledge is as respectable an object in life as one can in any likelihood pursue." There may even be more to it for, if carefully chosen, each investigation may help to elucidate a wider field. As the above-mentioned studies on certain aspects of the physiology of woodlice are of interest when considering the physiological and morphological changes involved in a major change of habitat, so the nocturnal periods of activity in woodlice, which have been studied in the last few years, have a bearing on the "mechanism" underlying all rhythms in animals. Next door to me woodlice are being used as material for population experiments, in the hope that they may cast light on the relative importance of intra- or inter-specific competition in the control of animal numbers. My own research is concerned with the "what" and "how much" of woodlice food when considering them as members of the diverse fauna of the soil, grass-roots and woodland leaf mould.

So these are some of the questions with which woodlice workers are at present concerned. Doubtless there are a score more yet to be answered. Only note that hardly any of this work is directly related to the importance of woodlice in respect of our, human, economy. Of the above-mentioned researches, that one which has the possibility of direct application is, perhaps, my own work which may have a bearing on forestry

* "Larval Forms and Other Verses," by Walter Garstang, edited by A. C. Hardy, Basil Blackwell, 1951.

management. But one cannot tell when, say, the work on the control of woodlice populations, which in itself is discovering interesting data related to other aspects of woodlice biology, might not be of interest were woodlice to become pests in this country, as they are alleged to have done in the tiny island of Tristan da Cunha. But, just as there is more to a book than its *contents*, so, one should appreciate, there is more to woodlice than their economic importance.

Of course, one cannot foretell the future. One does know, however, that in the past woodlice have impinged directly on man. *Armadillidium vulgare*, which rolls itself into a ball, is still commonly called the pill-louse, while Thomas Penny, the botanist who died in 1588, suffered from asthma and is reported by his friend Mouffet to have treated himself

with woodlice crushed in wine. Here we have woodlice playing the medical role; in culinary art they have also found their place. As late as 1885, Mr. V. M. Holt recommended "fried soles with woodlice sauce" for the second course in a menu fit for a gentleman's dining table.

Finally, if you would ask: Why the name woodlouse? (it neither is louse nor always eats wood) one can only reply: Nor does the *Hippocampus Major* look like Epsom Downs. Old names are seldom wholly consistent with the black-and-white of truth, yet they are often apt. Terrestrial Isopods have been referred to as hog-slaters, sow-bugs, and monkey-peas. There must be many more names, for woodlice are conspicuous and common. They may even be seen on a damp wall.

LETTERS TO THE EDITOR

NOT YET DIAGNOSED

Dear Sir,

Further to Dr. Prewer's article "Not Yet Diagnosed," I think your readers may be interested to hear of a similar experience that happened to me last year.

A clergyman friend of mine dining with me one evening mentioned that he was puzzled by certain unusual happenings in his vicarage which had been extending over a period of several years. He told me of various occurrences with much diffidence in case (as he put it) I should think he was "balmy." The man in question was a solid and unimaginative bachelor, approaching middle age, and with cast-iron nerves. Knowing him as I did, I felt that there must be something in it, although I was somewhat sceptical. I accordingly arranged with him to bring a representative "committee of investigation" chosen by myself, and to see if we could "lay the ghost."

On the night of July 18-19, 1952, at 11 p.m., the following came to the vicarage, and I think you will agree this committee was both varied and representative: My wife and myself, two daughters (one a teacher and the other a law student), my anaesthetist, a member of the Stock Exchange, a wine merchant, a Church Army sister, a bishop and a curate! The first thing we did was to make a tour together of the whole of the vicarage, shutting all doors and windows, and then to wait in the lounge. We did not have long to wait, for the "fireworks" started at 11.35 p.m. when the following phenomena occurred (I kept a written record with times carefully noted):

11.35 and 11.42—Doors slammed very loudly twice,

11.43—Noise of falling metal. We went to the back stairs and found scattered there six stair-carpet clips. These had come from a drawer in one of the bedrooms and when we investigated we found the drawer and the room door wide open (both were shut at 11 p.m.).

11.47—Very loud and somewhat uncanny owl-like howl. Doors slammed and more metal fell. (We found that a saucepan lid had removed itself from the kitchen and was lying on the floor on an upper landing.)

11.53—Loud whistle and door banged.

11.59—Loud howl. Faint scream and door banged.

12.15—Lavatory cistern pulled itself! We rushed up, arriving within seconds of the sound of flushing and found the chain swinging violently.

Abnormal phenomena continued to occur at very frequent intervals until 1.9 a.m., when there concluded a most interesting and totally inexplicable evening.

All the committee agreed that these phenomena were not caused by any human agency nor by anything else physical that we could account for. It was certainly not imagination. For my own part, I am no longer a sceptic and I am fully prepared now to believe anyone who tells me that he has seen a "ghost," for after all we all *heard* things inexplicable to us, can we reasonably doubt that some people may *see* odd things?

May I suggest a Christian explanation? There is no doubt that in Bible days people believed in evil spirits. In heathen countries to-day missionaries see such phenomena far too often to have any doubts as to their origin. Why not

accept the Bible at its face value and assume that such things occur? Surely this is reasonable in the absence of any evidence to the contrary. In support of this Bible view the following is the sequel to this most interesting evening:

Before we left I had a frank chat with my vicar friend and I told him that I thought whether the ultimate cause of the trouble was evil spirits or not, it was something very unpleasant and it was hindering the good work in his parish, inasmuch as it was preventing him sleeping, etc. We agreed with one or two other members of the committee that we would daily pray that God would cast out the spirit or cause the phenomena to cease. Now, although these happenings had been going on for several years *nothing further has happened except on one solitary occasion since we pledged ourselves to pray in this way.* After all, is this not merely what was frequently done in the early church known as exorcism?

If anyone can give any other explanation of all this I shall be most interested to hear it.

Yours faithfully,

C. MARTIN-DOYLE.

Mowbray House,
Great Malvern.

ADDED SOUNDS

Dear Sir,

Only after much thought am I able to bring myself to criticise the excellent article upon "Added Words for Added Sounds," by J. L. Struthers (November, 1953). He states that rhonchi are snores, rales are rattles and crepitations are crackles and, with the authority of Laennec and Samuel Gee behind them, these terms have always been good enough for me. I see no difficulty in using them in a strictly etymological sense, in that rhonchi are sustained notes and the others are not, rales being louder than crepitations because rattles are louder than crackles. He further states that "On sibili and sonori there is no disagreement." Having never been able to fathom the difference between sibili and sonori, I hope he means that we all agree that they are superfluous terms. If sub-divisions of rhonchi and rales are desirable, then they may be classified as loud, medium and soft; crepitations are always soft and so need no further designation.

My main criticism of Struthers's paper is that he has seen fit to tabulate terms used by various distinguished physicians under the headings of "dry" and "moist" sounds. Surely this confuses the question immeasurably, since all added sounds are associated with moisture, whether they arise from the bronchi, alveoli or pleura. Indeed, no part of the lung ever is dry, so far as I know.

I'm all in favour of rhonchi, rales and crepitations, and leaving it at that.

Yours faithfully,

NEVILLE OSWALD.

70, Harley Street,
London, W.1.

PS. Just off for a good stiff drink of dry water.

MUSIC OF ST. BART'S THE GREAT

Sir,

May I thank you and, through you, Dr. Steinitz for the fascinating article in the December issue on music at our famous priory church.

Dr. Steinitz has unfolded an inspiring story, and it would certainly be wonderful if, as he con-

cludes, it may be possible to hold an annual London festival of church music in the church. The setting is magnificent in the extreme, and the acoustics are perfect. It is always a deeply moving experience to be present at one of the Sunday services, impeccably sung by Dr. Steinitz's choir, and at one of his London Bach choir recitals. Their recent concert in October this year was a rare musical treat in every way.

Our own hospital has had association with church music of no mean order. In the last century Dr. Henry Gauntlett was organist of St. Bartholomew the Less. Among Bart's alumni can be counted the former Poet Laureate, Dr. Robert Bridges, and a one-time physician-accoucheur, Sir Francis Champneys. Both these were church musicians of the front rank, and some of Sir Francis Champneys's beautiful tunes are in Hymns Ancient and Modern, and his chants are still sung.

As an old Bart's man, I should like to state I am a Fellow for the Council of the Incorporated Guild of Church Musicians, an Anglican order founded in 1888, which confers its own diplomas of associate, licentiate and fellowship, and has an annual service at Holy Trinity, Kingsway. Next year it will be on the Wednesday in Easter week.

I would be very happy to welcome any old Bart's man who is an Anglican communicant as a member of the guild and to give information in regard to its various diplomas and other activities. The guild seeks to maintain the highest standards of church music in the parish churches of England, where it is very largely inspired by the incomparable cathedral tradition. The music at our beautiful priory church epitomises the splendour of the Anglican liturgy at its best.

Thanking you for printing the article.

I am, sir,

Yours, etc.,

I. B. GROMLEY SMITH,

6, Furzedown Road,
Sutton.

IF THE CAP FITS, WEAR IT

Sir,

The cult of games and societies was invented by schoolmasters to keep boys clean in thought and deed. However, a recent correspondent wishes to provide sex-appeal in the Bart's clubs to stimulate enthusiasm and to increase membership. He considers that only those who actively embrace the opportunities to be offered them are worthy to become doctors. The cure for cancer is to be found only on the playing fields of Chislehurst.

Those with sufficient initiative and imagination to amuse themselves without the aid of the Secretarial herd move that self-appointed crowd of busybodies to the depths of frustration displayed in the letter from your recent correspondent. Lots of lovely clubs, a fine body of club officers, no members! Alas, for the spirit of the Upper Vth! Students who stay away from the Bart's clubs and Mr. Butlin's camps have indeed some quaint ideas about the priorities of life: for many, apparently, the sole use of the hospital is as a warehouse of medical knowledge! Poor boobs, they do not realise that their first duty is to give themselves as fodder to the ego of the Secretaries.

But we who cherish freedom must not emulate the intolerance of the Secretaries and such: we must not chuck them in the fountain. I for one believe that we can co-exist. I would even venture

to suggest that they perform a useful function. But we must see them as they cannot see themselves—in perspective.

Sir, what do first-year students do after 5 p.m.? Perhaps in a crowded train they progress to a snack at Lyons and a cheerless bed-sitting room at Earl's Court, where boredom is alleviated by a study of the comparatively thrilling lives of *Taenia* and the fern. Meanwhile, the squash and tennis courts and the well-equipped recreation rooms are available at Charterhouse; but who will stay to play draughts on an empty stomach? Could not the College Hall make available its excellent cuisine to non-resident students and their guests? An à la carte menu from 6 p.m. to 8.30 p.m. might be ideal: not everyone can afford 3s. for dinner and a shorter mealtime might cause a crush. Then the poor could dine with their guests before going to the theatre, and the indigent could eat a bellyful and watch the television.

Would it not be possible to arrange this for a trial period of three months? If such an experiment were successful, perhaps those planning the new medical college buildings at the hospital might consider providing similar facilities there.

Yours sincerely,

J. M. BARNES.

Abernethian Room.

A BART'S REGISTER

Dear Sir,

In general practice I am often being asked by patients who are moving to another district if I can recommend a local doctor to them. My instinct is always to try to find another Bart's man for them, but this entails a very tedious bit of research into the medical directory and there is no reference there to the doctor's type of practice. (I once referred a patient to the senior M.O. of a mental hospital—at his private address.)

Is it economically or otherwise impossible to publish an up-to-date or annual district list of Bart's men with an indication such as G.P., specialist, etc., after their name. I for one would willingly become a subscriber.

Yours sincerely,

ROBERT HUNT COOKE.

20, Brompton Grove,
Hendon, N.W.4.

RALPH CROWLEY

Sir,

It was delightful to see Penry Rowland's tribute to Ralph Crowley in your last issue. We were privileged to have Dr. Crowley as a resident for years in this town and have the benefit of his wisdom, enormous energy and great personality. I well remember one of his colleagues in the Board of Education describe him as the "wandering sun-beam of the Board," a description which gave great delight to his friends. Up to the end he was much the same as Rowland describes, and it is an inspiring thought of the influence all

through life he shed abroad quite apart from the great work he did for the school life of the nation's children.

Sincerely yours,

NORMAN MACFADYEN.

Lunderston, Letchworth,
Hertfordshire.

BRUCE CLARK

Sir,

Chrichton Starkey's retrospect of Bruce Clark gives a very true picture of the man. I should like to record a vivid impression of a disarticulation at the hip joint that I saw him perform forty years ago.

A dresser compressed the external iliac artery at the groin, whilst another held the limb. "The Bruiser" inserted a very long amputation knife with a nine-inch blade obliquely inwards from the outer side of the limb directly into the rim of the acetabulum. With one continuous movement the knife encircled the limb. Towards the end of the sweep the femoral vessels were divided, and were grasped in the fingers of his left hand. The whole procedure was completed in less than half a minute.

I do not suppose any living surgeon could insert a knife directly into the acetabulum at the first attempt, let alone divide all the structures in this manner. The vessels were next sutured with Spencer Wells forceps and ligatured, and the flaps sutured. Current practice, of course, produces a much better looking and fashioned stump, but speed was then considered a very important factor in reducing shock.

BASIL HUME.

61, Harley Street.

AN APPEAL

Dear Sir,

Many of your older readers will remember the late Dr. John Hunter who was for some years Senior Resident Anaesthetist at Bart's during which time he was easily the most popular member of the Resident Staff. In his later years he specialised in anaesthesia for plastic surgery at The Queen Victoria Hospital, East Grinstead, and was possibly the greatest exponent of the art in young children. Owing to his long terminal illness and other causes, his widow has been left in very reduced circumstances. In view of the fact that she is in poor health and was a Bart's nurse, I feel sure that many would like to contribute to a fund which has been started by Sir Archibald McIndoe in order to help her.

I should be most grateful if any readers would send donations, however small, to Sir Archibald at 149 Harley Street, London, W.1.

Yours faithfully,

C. LANGTON HEWER

33, Stormont Road,
Highgate, N.6.

OBITUARY

We announce with regret the death, on December 26th, 1953, of Edward Hamilton Bruce Fox, in his eighty-second year. Dr. Fox qualified in 1896.

HOUSE APPOINTMENTS

January 1st, 1954, to June 30th, 1954

| | | | |
|------------------------------|---------------------------------|-----------------------------------------|--------------|
| Dr. G. Bourne | M. J. Hodgson | Skin & V.D. Depts. | |
| Dr. Bodley Scott | M. Evans (until 31/3/54) | Dr. MacKenna, Dr. Nicol | P. J. Barber |
| | G. H. Bush (from 1/4/54) | Eye Dept. | |
| Dr. E. R. Cullinan | L. Langdon | Mr. Phillips, Mr. Stallard | M. S. Wilson |
| Dr. K. O. Black | A. S. Wint (until 31/3/54) | Gynae. and Obs. Depts. | |
| | D. M. Shaw (from 1/4/54) | Mr. Beattie | |
| Dr. A. W. Spence | J. H. Fairley | Mr. Fraser, Mr. Howkins | |
| Dr. N. C. Oswald | R. J. Blow (until 31/3/54) | K. R. Hughes, D. B. L. Skeggs (Interns) | |
| | I. G. Tait (from 1/4/54) | J. S. Hopkins (Junior H/S) | |
| Dr. E. F. Scowen | M. V. J. Fitzgerald | Anaesthetists | |
| Dr. W. E. Gibb | R. J. Knight (until 31/3/54) | J. R. W. McIntyre (S.R.A.) | |
| | A. H. M. Rimmer (from 1/4/54) | W. R. Daniel | |
| Prof. R. V. Christie | P. Sleight | C. J. R. Elliott | |
| Dr. G. W. Hayward | J. E. Cairns (until 31/3/54) | Dental Dept. | |
| | B. S. Jones (from 1/4/54) | R. T. Pattinson | |
| Mr. J. B. Hume | C. J. Porteous | Orthopaedic Dept. | |
| Mr. A. H. Hunt | G. H. Bush (until 31/3/54) | (Accident Service) | B. D. Hick |
| | M. Evans (from 1/4/54) | Casualty H.P. | |
| Mr. R. S. Corbett | M. A. Pugh | E. F. Brooks | |
| Mr. A. W. Badenoch | A. H. M. Rimmer (until 31/1/54) | | |
| | R. J. Knight (from 1/4/54) | at HILL END HOSPITAL | |
| Mr. J. P. Hosford | P. Knipe | E.N.T. Department | |
| Mr. E. G. Tuckwell | D. M. Shaw (until 31/3/54) | J. P. N. Hicks | |
| | A. S. Wint (from 1/4/54) | R. G. D. Newill | |
| Prof. Sir J. P. Ross | M. L. Croftill | Orthopaedic Dept. | |
| Mr. J. B. Kinmonth | B. S. Jones (until 31/3/54) | S. P. Lock | |
| | J. E. Cairns (from 1/4/54) | D. J. Buttery | |
| Mr. C. Naunton Morgan | | Thoracic Department | |
| Mr. D. F. E. Nash | I. G. Tait (until 31/3/54) | Miss J. Cook | |
| J. G. Ross | R. J. Blow (from 1/4/54) | G. F. B. Birdwood | |
| Children's Dept. | | Neuro-Surgical Dept. | |
| Dr. C. F. Harris | R. A. Roxburgh | H. S. Jones | |
| Dr. A. W. Franklin | Mrs. M. R. Cudowicz | Anaesthetists | |
| E.N.T. Dept. | | H. D. Jones | |
| Mr. Capps, Mr. Jory | J. P. N. Hicks | A. B. Lodge | |
| Mr. Hogg, Mr. Cope | R. G. D. Newill | | |



BOOK REVIEWS

BASIC BACTERIOLOGY. by Lamanna and Mallette. Baillière, Tindall & Cox, pp. 678, illustrated. 76s. 6d.

Bacteriology as usually taught in medical schools is an applied science in which bacteria are studied in conjunction with the diseases they produce, and for the medical student a range of textbooks is available which includes practical manuals of laboratory work, and weighty volumes for reference. Students of bacteriology as a separate science, and biochemists wishing to use bacteria in their researches are perhaps less fortunate. This book, from the Departments of Bacteriology and Biochemistry of the Johns Hopkins University School of Hygiene and Public Health, is an attempt to bridge the gap between elementary textbooks and specialised monographs, and to provide the graduate science student with a guide to the basic behaviour of bacteria. The preface claims that "this book is intended to present the nature of the cytological, morphological, taxonomic, physiological and biochemical problems which confront the bacteriologist," and these aspects have been discussed at considerable length. Some fifty-

six pages are, for instance, devoted to the principles underlying the use of dyes and staining reactions, and a consideration of the Gram reaction occupies eleven pages. Among subjects dealt with in other chapters are the structure of bacteria, surface properties, growth, physical factors affecting bacteria, bacterial genetics and bacterial nutrition and metabolism. A final chapter discusses theoretical aspects of chemical disinfection, short sections being devoted to penicillin and streptomycin.

For those whose main interests lie in clinical pathology this book is one for reference and one in which bacteria may be seen displayed in surprising isolation. For those for whom it is intended it should provide a most valuable guide, although the price may deter some prospective purchasers.

R. A. SHOOTER.

A HANDBOOK OF RADIOTHERAPY FOR SENIOR AND POST - GRADUATE STUDENTS, by W. M. Levitt. Harvey & Blythe, pp. 232. 30s.

Very frequently nowadays it is necessary to choose between surgery and radiotherapy in the treatment of a patient's condition. Most students

could give an outline of the course of the surgical treatment, but very few could say what is going to happen to the patient in the radiotherapy department. No physician or general practitioner is fitted to advise a patient as to the possible alternatives of treatment unless he knows the principles and scope of irradiation treatment.

This book is very well produced and illustrated, and is of a reasonable size. The author includes a chapter which might have been entitled "Physics without tears," for he says: "It has been my experience that a great many medical men are not only not interested in this subject [physics]—but find it positively repellant." There follows an excellent chapter on the general effects of radiations on cells, tissues and organs. He then goes on to describe the application of radiotherapy to the various organs and systems of the body, including the relative sensitivity of different structures or tumours to radiation.

This is a very readable account of the subject. It is well balanced and not only is the scope of radiotherapy outlined but also its limitations, where these occur, are also described.

ADVICE TO THE EXPECTANT MOTHER ON THE CARE OF HER HEALTH AND THAT OF HER CHILD, by F. J. Browne. (Tenth Edition). E. and S. Livingstone Ltd. 1s.

It is not easy to write a booklet for pregnant women that is neither sentimental nor too technical, but Professor Browne may be congratulated on having succeeded. Plenty of factual information is given lucidly yet fully. Although written primarily for young mothers, the nurse in training who was familiar with its contents would have a sound knowledge of the physiology and elementary pathology of pregnancy and the puerperium.

FURNEAUX'S HUMAN PHYSIOLOGY, by William A. M. Smart. Longmans, Green & Co. 10s. 6d.

Furneaux's book is an old friend, and the new edition has preserved enough of the diagrams and format to induce nostalgia. As it is only a book on physiology, a student nurse would need a separate one on anatomy, but it is the candidate for the Diploma of Nursing or Sister Tutor Certificate who will find it of most value. For 10s. 6d. it supplies a full measure of information in a direct and lucid style, well illustrated. One minor error of fact is on page 188. A Rh. positive man's children need not be 100 per cent Rh. positive unless he is homozygous.

PUBLIC HEALTH FOR THE NURSING STUDENT, by P. J. Cunningham and H. M. Cousens. Faber & Faber. 6s.

Social Aspects of Disease appear for the first time in the revised syllabus of the General Nursing Council, and this book is designed to meet the demand for a book on the subject for nurse students. It contains a good amount of factual information, lightened by anecdotes and conversations with patients. There is a useful bibliography.

DUKES' BACTERIA IN RELATION TO NURSING, 2nd Edition revised by Stanley Marshall. H. K. Lewis & Co. Ltd., pp. 204, illustrated. 17s. 6d.

Dr. Dukes' book has been used for years by candidates for Sister Tutor certificates, and the Diploma of Nursing of some universities. It con-

tains an excellent account of the use of the microscope in bacteriology, and of culture and identification of organisms. The collection and examination of a great variety of specimens is described, all common pathogens are discussed; the section on immunity is good, while the chapter on antibiotics fills an important gap in the old edition. There is a brief chapter on cross infection, mostly on dressing technique, and this is one that might be enlarged to show understanding of the bacteriological problems, prosaic but very important, of the ward nurse. Nurses who take post-graduate certificates are likely to help in the teaching of bacteriology, and if there were a closer inspection in this book of the everyday bedside questions of hygiene and technique, it would be as useful to the teacher who had her Diploma as it is now to the candidate working for it.

ANATOMY, PHYSIOLOGY & HYGIENE, by A. Millicent Ashdown and E. Bleazby. (New Revised Ed.), pp. 337, illus. J. M. Dent & Sons Ltd. 10/6d.

A nurse's text book on Anatomy, Physiology and Hygiene is principally written for students taking Part I of the Preliminary State Examination. These will find that this book covers the present syllabus at a reasonable cost. The anatomical section is complete and fully illustrated. It would be improved if there were a method of indicating to the junior nurse which were the essential facts to be acquired early.

The Hygiene portion needs modernisation. *Sassafras* is still given as the treatment for pediculosis; rayon and nylon deserve mention as material for clothing; the flash process of pasteurisation could be described. The article on transfusions is good, though it is a little difficult to see why it was thought necessary here.

The sections on the vitamins and Rhesus groups are very good, but for tutors not student nurses.

DISEASES OF THE EYE, by Eugene Wolff. 4th Edition. With 150 text illustrations and 6 colour plates, pp. 224. 30s.

The examination candidate is more or less committed to learning his ophthalmology from a textbook, for although the subject closely borders on the territories of medicine and surgery, all too often it is dismissed to the esoteric limbo of the special department, where personal experience is confined to a few weekly sessions. Mr. Wolff's book, while in no way pretending to be a substitute for clinical observation, will at any rate meet the demand for theoretical knowledge fully and readably. A few minor points may be mentioned; it is a pity there is no preliminary chapter on the anatomy of the eye and orbit, and that operative details are not included with the descriptions of the separate conditions instead of being relegated to the end of the book. Again, the differences between the retinal changes in hypertension and arterio-sclerosis are not adequately enough stressed, and one would have liked a mention of the stages in which they are classically grouped. However, the book is well printed and very adequately illustrated, and should be deservedly popular with final year students.

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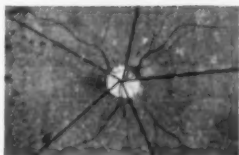
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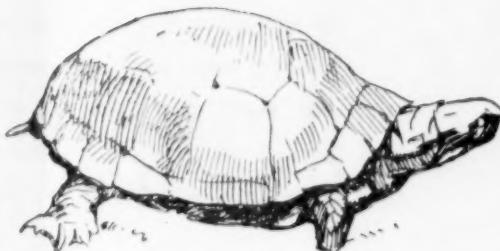
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